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WEATHER BUREAU

BULLETIN

OF

INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON JANUARY 1, 1877.

0:7 A. M. MEXICO mean time.
7:7 A. M. SAN JOSE mean time.
0:0 P. M. LISBON mean time.
0:28 P. M. MADRID mean time.
0:43 P. M. GREENWICH mean time.
0:53 P. M. PARIS mean time.
1:1 P. M. BRUSSELS mean time.
1:4 P. M. UTRECHT mean time.
1:13 P. M. BERNE mean time.

7:35 A. M. WASHINGTON mean time.

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1:26 P. M. CHRISTIANIA mean time.
1:33 P. M. COPENHAGEN mean time.
1:33 P. M. ROME mean time.
1:37 P. M. BERLIN mean time.
1:49 P. M. VIENNA mean time.
1:55 P. M. STOCKHOLM mean time.
2:18 P. M. ATHENS mean time.
2:39 P. M. CONSTANTINOPLE mean time.
2:44 P. M. ST. PETERSBURG mean time.

ALGERIAN SERIES.

Furnished by the coöperation of General d'Eudeville, Commandant Supérieur du Génie in Algeria.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Nemours			30.09	764.3	66.0	18.9	66	Calm			0		9			0	0	Hidden	Charnot.
Algiers			30.08	763.9	70.7	21.5		SSW			2		1			0	0	Clear	Peter.
La Calle			30.08	764.0	78.4	25.8	38	SSW			2		0			0	0	Clear	Fleury.
Tunis			30.15	765.8	62.2	16.8		W			2		1			0	0	Clear	Jacques.
Sfax																			
Saida																			
Tebessa			30.17	766.3	65.8	18.8	24	SSE			4		2			0	0	Clear	Millot.
Geriville			30.22	767.5	63.5	17.5		SE			1		0			0	0	Clear	Bourgeois.
Laghouat			30.23	767.8	56.7	13.7	14	S			3		1			0	0	Clear	Lemaillot.
Biskra			30.15	765.8	60.8	16.0	32	N			1		1			0	0	Clear	Guyot.
			30.30	769.7	67.8	19.9	38	NE			2		0			0	0	Clear	Kuntz.

NOTE.—In the originals the distinction between the amount of upper and lower clouds is apparently not made. The weather is published as given. The rain-fall is measured at 7 a. m., local time.

AUSTRIAN SERIES.

Furnished by the coöperation of Professor Ferdinand Osnaghi, Director of the Imperial and Royal Central Meteorological Institute at Vienna.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Agram			29.85	758.1	55.2	12.9	57	SW			4		3			0	0		Prof. Ivan Stoxir.
Cracow, I. R. Observatory			29.62	752.3	38.8	3.8	80	W			1		10			0	0		Dr. Wierzbiski.
Eperies			29.87	758.7	33.8	1.0	96	S			2		10			0	0	Foggy	Julius Mikolik.
Gratz	28.41	721.7	29.66	753.3	54.3	12.4	41	NW			5		9			0	0		Andreas Rospini.
Hermannstadt	28.51	724.2	29.97	761.3	40.3	4.6	77	SE			0		0			0	0		Prof. Reissenberger.
Kremsmünster	28.20	717.7	29.63	752.7	34.2	1.2	82	NE			1		8			0	0		Prof. C. Wagner.
Lemberg			29.69	754.1	43.2	6.2	75	S			2		6			0	0		Dr. T. Stanecki.
Nyiregyhaza																			Habzsuda Daniel.
Pola			30.07	763.6	49.5	9.7	91	Calm			0		10s			0	0		I.R. Hydrographic Office.
Szegedin			29.87	758.7	41.0	5.0	81	SE			2		8			0	0		Karl Stancel.
Trieste			30.10	764.6	47.5	8.6	92	Calm			0		10			0	0	Dense fog	Prof. V. Farolfi.
Vienna			29.70	754.4	33.1	0.6	92	Calm			0		10			0	0	Foggy	I. R. Central Met. Obs'y.

NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 7 p. m., local time. The elevation of Gratz is 343.5 meters, or 1,126.9 feet; Hermannstadt, 407.8 meters, or 1,337.9 feet; Kremsmünster, 383.6 meters, or 1,258.5 feet.

BELGIAN SERIES.

Furnished by the coöperation of J. C. Houzeau, Director of the Royal Observatory at Brussels.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Arlon			29.43	747.6	51.1	10.6	66	SW			7		7			0.024	0.6		Royal Observatory.
Brussels			29.18	741.1	54.3	12.4	65	SW			8		9		SW	0.177	4.50		
Furnes			29.06	738.0	57.9	14.4	77	SW			8		7			0	0		
Maeseyck			29.21	741.8	55.8	13.2	65	SSW			8		5			0.075	1.9		

NOTE.—In the originals, the weather is occasionally given in general notes.

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BRITISH SERIES

Furnished by the coöperation of Robert H. Scott, Esq., Director of the Meteorological Office, London, Alexander Buchan, Secretary of the Scottish Meteorological Society, Edinburgh, and the respective Observers.

STATIONS.	Barometer. Corrected for instrumental error and temperature. Inches.	Barometer. Corrected for instrumental error and temperature. Millimeters.	Barometer. Reduced sea-level. Inches.	Barometer. Reduced sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Aberdeen	.....	.....	29.02	737.1	36.0	2.2	.....	NE	54	24.1	.....	.....	10	.....	.....	0.170	4.32	Squally.....	William Boswell.
Ardrossan	.....	.....	28.98	736.1	37	2.8	.....	NE	.....	.....	4	.....	8	.....	.....	.....	.....	Snowing.....	William McNeil.
Armagh, Observatory	.....	.....	29.03	737.3	38.8	3.8	.....	N	15	6.7	.....	.....	10	.....	.....	.....	.....	Gloomy.....	S. Call, for Dr. Robinson.
Birr Castle, (Parsonstown)	.....	.....	29.02	737.1	40.5	4.7	.....	N	.....	.....	1	.....	10	.....	.....	.....	.....	Overcast.....	J. Dreyer.
Bradford	.....	.....	28.78	731.0	45.3	7.4	.....	NW	.....	.....	2	.....	10	.....	.....	0.12	3.0	Gloomy.....	J. McLandsborough.
Bridgetown, (Barbados)	.....	.....	29.97	761.2	84.8	29.3	.....	NE	.....	.....	3	.....	4	.....	.....	.....	.....	*D. clouds.....	Sergt. J. F. Halanen, A.
Cambridge, Observatory	.....	.....	28.82	732.0	50.0	10.0	.....	WSW	.....	.....	5–6	.....	10	.....	.....	.....	.....	Raining.....	H. Todd. [H. C.
Cardington	.....	.....	28.88	733.5	48.0	8.9	.....	W	.....	.....	7	.....	10	.....	.....	.....	.....	Overcast.....	John McLaren.
Carlisle	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	T. Bell, for J. Cartmell.
Chatham, School M. E	.....	.....	30.00?	762.0?	50.4	10.2	.....	W	.....	.....	5	.....	2	.....	.....	.....	.....	Squally.....	Maj. C. N. Martin, R. E.
Dartmoor	27.59	700.8	29.07	738.4	45.4	7.4	.....	W	.....	.....	6	.....	10	.....	.....	.....	.....	Raining.....	R. E. Power.
Davos Platz, (Switzerland)	24.96	634.0	.....	.....	44.8	7.1	51	SW	.....	.....	2	.....	3	.....	.....	0	0	*D. clouds.....	Francis Redford, M. A.
Donaghadee	.....	.....	28.94	735.1	41	5.0	.....	NNE	.....	.....	7	.....	8	.....	.....	.....	.....	*D. clouds.....	J. Mac Gowan.
Dover	.....	.....	28.88	733.5	53	11.7	.....	SSW	.....	.....	8	.....	7	.....	.....	.....	.....	Threatening	J. Costello.
Eccles, (near Manchester)	.....	.....	28.78	731.0	44.9	7.2	.....	W	0.2	0.1	.....	.....	10	.....	.....	.....	.....	Raining.....	Thomas Mackereth.
Falmouth, Observatory	.....	.....	30.03?	762.7?	50.4	10.2	.....	SW	.....	.....	5	.....	9	.....	.....	.....	.....	Raining.....	The Staff.
Fort Napier, (Natal)	27.31	693.7	29.55	750.6	84.3	29.1	.....	E	.....	.....	2	.....	0	.....	.....	.....	.....	Blue sky.....	P'vt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)	.....	.....	29.96	761.0	83.0	28.3	.....	Calm	.....	.....	0	.....	5	.....	.....	.....	.....	*D. clouds.....	
Galway, Queen's College	.....	.....	29.48	748.8	34	1.1	.....	N	.....	.....	4	.....	5	.....	.....	.....	.....	*D. clouds.....	Prof. A. H. Curtis.
Gibraltar, (Mediterranean)	.....	.....	29.94	760.5	59.3	15.2	.....	W	.....	.....	3	.....	10	.....	.....	.....	.....	Gloomy.....	Corpl. C. Aitken, A. H. C.
Glasgow, Observatory	.....	.....	29.00	736.6	35.2	1.8	.....	NE	.....	.....	3	.....	10	.....	.....	.....	.....	Snowing.....	Lewis Stuart.
Great Yarmouth	.....	.....	28.76	730.5	50	10.0	.....	WSW	.....	.....	5	.....	8	.....	.....	.....	.....	Squally.....	G. T. Watson.
Greenwich, Royal Obs'y	.....	.....	28.98	736.1	50.2	10.1	.....	WSW	.....	.....	5	.....	10	.....	.....	Blank	Blank	Overcast.....	The Staff, for G. B. Airy.
Guernsey	.....	.....	29.14	740.1	52	11.1	.....	SW	.....	.....	8	.....	8	.....	.....	.....	.....	Squally.....	Dr. S. E. Hoskins.
Helston	.....	.....	29.04	737.6	53	11.7	.....	SW	.....	.....	6	.....	6c	.....	.....	0.4	10.2	.....	M. P. Moyle.
Holyhead	.....	.....	28.89	733.8	44	6.7	.....	NNE	.....	.....	5	.....	10	.....	.....	.....	.....	Misty.....	John Tilston.
Kew, Observatory	.....	.....	28.98	736.1	50.7	10.4	.....	SSW	32	14.3	.....	.....	10	.....	.....	.....	.....	Threatening	The Staff.
Kingstown	.....	.....	28.92	734.6	43	6.1	.....	NNW	.....	.....	5	.....	10	.....	.....	.....	.....	Gloomy.....	George Mitchell.
Leicester Museum	.....	.....	29.87?	758.7?	46.5	8.1	.....	SW	.....	.....	2	.....	10	.....	.....	.....	.....	Overcast.....	Wm. J. Harrison, F.G.S.
Malta, (Mediterranean)	.....	.....	30.17	766.3	67.0	19.4	.....	SW	.....	.....	2	.....	2k	.....	.....	.....	.....	*D. clouds.....	Corp'l. P. Bravis, A. H. C.
Nairn	.....	.....	29.07	738.4	35	1.7	.....	NNE	.....	.....	3	.....	8	.....	.....	.....	.....	¾ clouded..	W. D. Penny.
Nassau, (Bahamas)	.....	.....	30.00	762.0	75	23.9	.....	SE	.....	.....	7	.....	3	.....	.....	.....	.....	*D. clouds.....	Surg. Maj. Henry.
Nottingham, Observatory	.....	.....	28.84	732.5	46.1	7.8	.....	NW	.....	.....	6	.....	10n,d	.....	W	0.180	17.28	Raining.....	E. J. Lowe, F. R. S.
Oscott, St. Mary's College	.....	.....	28.87	733.3	44.1	6.7	.....	SW	.....	.....	6	.....	10	.....	.....	.....	.....	Raining.....	Rev. Stephen Whitty.
Oxford, Radcliffe Obs'y	.....	.....	28.96	735.6	48	8.9	.....	WSW	.....	.....	5	.....	10	.....	.....	.....	.....	Gloomy.....	J. Lucas.
Plymouth	.....	.....	29.00	736.6	51	10.6	.....	SW	.....	.....	5	.....	10	.....	.....	.....	.....	Overcast.....	John Merrifield.
Roche's Point	.....	.....	28.97	735.8	47	8.3	.....	N	.....	.....	4	.....	5	.....	.....	Black	Black	Cloudy.....	W. Kennedy.
Saint Ann's Head	.....	.....	28.89	733.8	50	10.0	.....	W	.....	.....	5	.....	10	.....	.....	.....	.....	Showery.....	John C. Walker.
Saint Helier, (Jersey)	.....	.....	29.20	741.7	52.8	11.6	.....	WSW	.....	.....	6	.....	10	.....	.....	.....	.....	Raining.....	A. P. Amy.
Sandwick Manse, (Orkneys)	.....	.....	29.18	741.2	31.6	— 0.2	.....	NE	32	14.3	.....	.....	8	.....	.....	.....	.....	*D. clouds.....	Rev. C. Clouston, LL. D.
Scarborough	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	F. Shaw.
Scutari Cemetery, (Turkey)	.....	.....	.....	.....	.....	.....	.....	SW	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	Sergt. W. H. Lyne.
Sheffield	.....	.....	28.80	731.5	46.9	8.3	.....	W	.....	.....	1	.....	10	.....	.....	0.535	13.59	Overcast.....	W. F. Cooper.
Siloth Rectory	.....	.....	28.91	734.3	37.2	2.9	90	NE	.....	.....	5	.....	10	.....	.....	0.020	0.51	Overcast.....	Rev. Francis Redford.
Stonyhurst, Observatory	.....	.....	28.79	731.3	44.6	7.0	.....	NW	.....	.....	0	.....	10n	.....	.....	.....	.....	Overcast.....	Rev. S. J. Perry.
Stornoway, Lewis C., (Hebr.)	.....	.....	29.15	740.4	34	1.1	.....	NNE	.....	.....	5	.....	10	.....	.....	.....	.....	Snowing.....	John Smith.
Stratfield Turgiss	.....	.....	28.95	735.3	49.8	9.9	.....	SW	.....	.....	3	.....	8	.....	.....	.....	.....	Squally.....	Rev. Charles H. Griffith.
Thurso	.....	.....	29.12	739.6	36	2.2	.....	ENE	.....	.....	5	.....	8	.....	.....	.....	.....	Gloomy.....	John Trotter.
Truro, Royal Institution	.....	.....	29.04	737.6	53	11.7	.....	W	.....	.....	7	.....	10	.....	.....	.....	.....	Raining.....	W. Newcombe.
Valencia, Observatory	.....	.....	29.06	738.1	47.0	8.3	.....	N	19	8.5	.....	.....	10	.....	.....	.....	.....	*D. clouds.....	The Staff.
SUB-SERIES.																			
Calf of Man, (Isle of Man)	.....	.....	.....	.....	46	7.8	.....	N	.....	.....	4	.....	10	.....	.....	0	0	.....	Henry Mercer.
Cape Good Hope, Obs'y	.....	.....	29.92	760.0	69.0	20.6	63	SSE	15	6.7	.....	10	6	.....	.....	.....	.....	.....	The Staff, for R. J. Stone.
Hobart Town, (Tasmania)	.....	.....	29.73	755.1	68.0	20.0	82	N	.....	.....	1	.....	4k	.....	.....	0	0	.....	Francis Abbott, F.R.A.S.
Leith, Restalrig Park	.....	.....	29.00	736.6	34.8	1.6	.....	NE	.....	.....	6	.....	10n	.....	.....	1.02	25.9	Overcast.....	Andrew Gibb.
Mauritius, Observatory	.....	.....	29.96	761.0	83.9	28.8	62	NNE	16.0	7.2	.....	2	6	.....	NE	0.035	0.89	Squally	C. Meldrum.
Melbourne, Observatory	.....	.....	30.06	763.5	58.0	14.4	55	S	15	6.7	.....	.....	6	.....	.....	0.04	1.0	Fine.....	R. L. J. Ellery.
Monach L't-house, (Hebrides)	.....	.....	29.23	742.4	36	2.2	.....	NE	.....	.....	6	.....	10	.....	.....	0.2	5.1	.....	J. Youngclause.
North Unst, (Shetland Is.)	.....	.....	29.17	740.9	39	3.9	.....	N	.....	.....	8	.....	10	.....	.....	Blank	Blank	.....	Robert Burnet.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—Generally, the originals do not give the relative humidity, rain-fall, or distinction between upper and lower clouds. The originals give the wind direction to 32 points and weather by the Beaufort notation. The originals give the barometer for Aberdeen, Cardington, Galway, Oxford, St. Heller, Sandwick, Scarborough, Stonyhurst, Leith, Monach and North Unst as read off and the cloudiness for Stornoway by the scale 0 to 4. The wind-force is given by the scale 0 to 12 in the official series; 0 to 6 in the sub-series; except in lbs. per square foot for Greenwich and Hobart Town. The rain-fall is measured at Aberdeen at 10 a. m.; Bradford, 9 a. m.; Hobart Town, 7:30 a. m.; Nottingham, 6 p. m.; Mauritius, 9 a. m., local time. The elevation of Dartmoor is 1,400 feet, or 426.7 meters; Davos Platz, 5,105? feet, or 1,556.0? meters; Fort Napier, 2,200 feet, or 670.6 meters. *Detached clouds.

By authority of the MINISTER OF FOREIGN AFFAIRS.

COSTA RICA SERIES.

Furnished by the coöperation of Senor Federico Maison, Director of the Central Office of Statistics and Meteorology.

San José	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
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DANISH SERIES.

Furnished by the coöperation of Captain N. Hoffmeyer, Director of the Royal Danish Meteorological Institute at Copenhagen.

Copenhagen	.....	.....	28.98	736.1	40.5	4.7	87	SSW	.....	.....	2	.....	10	.....	.....	.....	.....	.....	.....
Fanöe	.....	.....	28.81	731.8	41.5	5.3	82	S	.....	.....	6	.....	8	.....	.....	.....	.....	.....	.....
Godthaab, (Greenland)	.....	.....	29.84	757.9	9.3	—12.6	88	Calm	.....	.....	0	.....	0	.....	.....	.....	.....	.....	.....
Stykkisholm, (Iceland)	.....	.....	29.91	759.7	17.1	— 8.3	91	NE	.....	.....	6	.....	0	.....	.....	.....	.....	.....	.....
Thorshavn, (Faröe)	.....	.....	29.41	746.9	24.8	— 4.0	75	NNE	.....	.....	4	.....	7	.....	.....	.....	.....	Snowing.....	.....
Vestervig	.....	.....	28.84	732.6	39.6	4.2	100	SSW	.....	.....	4	.....	10	.....	.....	.....	.....	Raining.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
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NOTE.—The originals give the wind-force by the scale 0 to 6; occasionally, weather by Vienna symbols; no distinction between the amount of upper and lower clouds.

FRENCH SERIES.

Furnished by the co operation of His Excellency, U. J. Le Verrier, Director of the Paris Observatory, and the respective Observers.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Alençon			29.43	747.4	48.2	9	89	SW			8		5k		SW	0	0	Cloudy	Normal School.
Amiens			29.20	741.7	55.4	13.0	64	WSW			6		2		SW	0	0	Slightly cl'dy	Normal School.
Avignon			29.83	757.7	56.8	13.8	62	SSE			1		8		SSW	0	0	Very cloudy	Normal School.
Bar-sur-Seine			29.56	750.9	54.0	12.2	66	SW			6		10		SW	0	0	Covered	C. Saillard.
Beaumette, (near Angers)			29.44	747.7	54.9	12.7	70	SW	56.8	25.4					SW	0	0		Beaumette Observ'tory.
Beauvais			29.34	745.2	54.5	12.5	63	SW			6		8		WSW	0	0	Very cloudy	Normal School.
Besançon			29.64	752.8	58.3	14.6	34	S			6				SW	0	0		Normal School.
Bourg en Bresse			29.71	754.5	52.3	11.3	82	SE			2		6ck		N	0	0	Cloudy	Normal School.
Bourges			29.67	751.0	52.7	11.5	76	WSW			6		2		SW	0	0	Slightly cl'dy	Normal School.
Brest			29.18	741.1	52.7	11.5	83	WSW			7		9		WSW	0.049	1.25	Squally	Naval Observatory.
Carcassonne			29.76	755 9	54.0	12.2	82	E			2		10		W	0	0	Covered	Normal School.
Caen																			Normal School.
Chartres			29.61	752.1	56.1	13.4	86	SW			4		4		NNE	0	0		Normal School.
Châlons-sur-Marne			29.31	744.4	57.2	14.0	53	SW			6	8c		NW		0	0	Very cloudy	Normal School.
Clermont			29.60	751.9	58.3	14.6	60	SE			4		8		SW	0	0	Very cloudy	Puy de Dome Obs'y.
Commercy			29.54	750.4	54.3	12.4	62	SW			6		6cns		SW	0	0	Cloudy	Normal School.
Commune de Gréasque*			29.92	759.9	54.5	12.5	61	NE			2		8		SW	0	0		M. Kina.
Grenoble			29.72	755.0	58.5	14.7	53	SSW			8		5k		SW	0	0	Cloudy	Normal School.
La Roche-sur-Yon			29.52	749.7	55.0	12.8	72	S			8		5		N	0.004	0.1	Cloudy	Normal School.
Le Mans			29.43	747.5	54.1	12.3	69	W			2		5		W	0	0	Cloudy	Normal School.
Lons-Le-Saulnier			29.59	751.6	57.4	14.1	55	SW			2		5		W			Raining	Normal School.
Lorient			29.37	746.0	56.8	13.8	58	SW			8		8		SW	0.102	2.6	Very cloudy	Naval Observatory.
Mâcon			29.74	755.4	56.8	13.8	98	S			2		10			0	0	Covered	Normal School.
Metz			29.55	750.6	55.4	13.0	60	SSW			6		10			0.138	3.5		M. Schuster.
Mirecourt			29.55	750.6	57.4	14.1	42	SW			6		10		SW	0	0	Covered	Normal School.
Nismes			29.72	754.9	56.8	13.8	71	S			1		5		NE	0	0	Cloudy	Normal School.
Orleans			29.28	743.7	51.1	10.6	72	SE			3		5		WSW	0.063	1.6	Cloudy	Normal School.
Paris, Observatory			29.38	746.2	55.4	13.0	62	SSW			6		3k		SW	0	0	Slightly cl'dy	National Observatory.
Parthenay																			Normal School.
Privas																			Normal School.
Rochefort, Observatory			29.80	756.9	52.5	11.4		S			2		2		S	0	0	Slightly cl'dy	Normal School.
Rouen			29.60	751.8	56.7	13.7	70	SW			6		8			0	0	¾ covered	Naval Observatory.
Saint Lo			29.29	744.0	57.2	14.0	58	S			10		2		S	0	0	Slightly cl'dy	Normal School.
Tarbes																			Normal School.
Villefranche	28.55	725.1	29.59	751.6	65.3	18.5	67	W			2		5		E	0	0	Cloudy	Normal School.
			29.69	754.2	50.0	10	87	SE			8		8s			0	0	Cloudy	Normal School.
Sub-Series.																			
Fort de France, Martinique			29.97	761.1	77.4	25.2													L'Abbé Marchési.
Marseilles			29.81	757.2	59.7	15.4	54	E			3		10					Rainy	Marseilles Observatory.
Mont-Louis	24.69	627.0	30.00	762.0	43.9	6.6	46	W	13.0	5.83			10		SW	0	0		—. Falguère.
Montsouris, Paris			29.38	746.2	55.0	12.8	65	SW			6		7		SW	0	0	Squally	Montsouris Observatory
Perpignan			29.71	754.6	59.7	15.4	62	E	5.6	2.50			7		SW	0	0		Dr. Fines.
Pic du Midi, (Summit,) H. P.																			M. Baylac.
Pic du Midi, (Plantade,) H. P.	22.23	564.6			29.7	— 1.3		NW			4		10			0.240	6.1	Snowy	General de Nansouty.
Saint Maur, (near Paris)			29.39	746.6	55.6	13.1	67	SW			6		3			0	0	Slightly cl'dy	E. Renou.
Toulouse			29.71	754.6	58.6	14.8	75	SSE			6		10			0.048	1.1		Toulouse Observatory.
Tours			29.50	749.4	56.3	13.5	64	SSW			4		6		WSW	0	0		C. Marquet.
Versailles, (near Paris)			29.40	746.7	55.4	13.0	68	SW			6		8			0	0	Almost cov'd	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai)			30.37	771.4	34.3	1.3	37	N	15.9	7.1			0			0	0		Marc Dechevrens, S. J.

Note.—Generally, the originals give the wind-force by the scale 0 to 7; no distinction between upper and lower clouds, and, in the official series, the amount by the scale 0 to 4; the rain-fall as measured at 7, 8 or 9 a. m., local time; at Clermont, 9 a. m. of the following day; the weather in general terms as published. The elevation of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; Clermont, 388 meters, or 1,272.9 feet; Commune de Gréasque, 322 meters, or 1,056.4 feet; Pic du Midi, (Summit,) 2,877 meters, or 9,439.1 feet; Pic du Midi, (Plantade,) 2,866 meters, or 7,762.6 feet; Tarbes, 308 meters, or 1,010 feet. In correcting the Mont-Louis barometric observations for altitude, the constant 135. millimeters has been added. *Bouches-du-Rhône

GERMAN SERIES.

Furnished by the coöperation of Professor Geo. Neumayer, Superintendent Imperial Hydrographic Office, Berlin.

Bamberg			29.53	750.0	47.8	8.8	73	SW			3		9	W		0	0		Prof. T. Hoh.
Berlin			29.34	745.3	50.9	10.5	72	S			4		7			0.024	0.6		Prof. Arndt.
Breslau			29.53	750.0	47.5	8.6	62	S			5		10			0	0		Royal University Obs'y.
Carlsruhe			29.47	748.4	61.9	16.6	36	SW			5		9			0	0		A. Senz.
Cassel			29.34	745.1	54.1	12.3	48	SSW			8		5	W		0	0		Dr. H. Möhl.
Crefeld			29.17	740.8	59.0	15.0	50	SW			6		4			0	0		Director Lose.
Emden			29.04	737.5	51.3	10.7	60	SW			6		10			0.142	3.6		Prof. Prestel.
Frankfort on the Main			29.41	746.9	55.9	13.3	43	SW			5		7			0	0		Physical Society.
Friedrichshafen	28.22	716.8	29.67	753.6	42.3	5.7	80	S			4		6			0.220	5.6		M. Wilhelm.
Hamburg			29.05	737.9	54.1	12.3	53	SSW			7		10ks	SSW		0.094	2.4	Stormy	Captain F. Hegemann.
Kiel			28.98	736.1	49.6	9.8	66	SSW			3		10			0.067	1.7		Prof. G. Karsten.
Königsberg, (Prussia.)			29.34	745.3	39.9	4.4	90	SW			2		10			0.035	0.9		Prof. E. Luther.
Köslin			29.27	743.4	48.2	9.0		SW			3		5			0	0		H. Müller.
Leipsic			29.42	747.3	50.4	10.2	55	SSW			3		8	SW		0	0		Prof. Bruhns.
Memel			29.32	744.8	36.9	2.7	93	SSW			5		10ks			0.083	2.1		Reinbrecht & Skalweit.
Münster			29.19	741.3	56.8	13.8	65	SW			5		10			0	0		Prof. E. Heis.
Neufahrwasser			29.30	744.3	40.5	4.7	84	S			3		10			0	0		A Lothe.
Posen			29.44	747.7	48.2	9.0	65	SW			5		10			Inap.	Inap.		Dr. Magener.
Strassburg, (in Alsace)			29.52	749.7	59.9	15.5	44	SW			2		10			0	0		Dr. Schur.
Stuttgart			29.55	750.5	59.4	15.2	29	W			4		8			0	0		Prof. Schoder.
Thorn																			Dr. Hasenbalg.
Treves, (Trier)			29.35	745.5	57.7	14.3	49	W			8		10			0	0	Foggy	Prof. Flesch.
Weissenburg, (Bavaria,)	28.06	712.7	29.54	750.3	53.1	11.7	43	W			4		9	W		0	0		Dr. von Bebber.
Wustrow, Naval School			29.12	739.7	47.3	8.5	65	S			7		8			0	0		E. F. Schütz.
German Naval Series.																			

Note.—The elevaon of Friedrichshafen is 418.4 meters, or 1,356 9 feet; Weissenburg, 431 meters, or 1,414.0 ft. In the originals the distinction between the amount of upper and lower clouds is not made. It is not always certain that the remarks in the weather column refer to the moment of observation.

GREEK SERIES.

Furnished by the coöperation of Professor Dr. J. F. Julius Schmidt, Director of the Royal Observatory at Athens.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Athens	.....	.....	30.14	765.5	58.1	14.5	.....	SW	.....	.....	.....	.....	.....	.....	.....	.....	.....	Clear	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

Note.—The originals give the barometer corrected, but not reduced to sea-level; occasionally the kind of clouds; the weather as published. They omit the humidity, wind-force, amount of cloudiness and rain-fall.

ITALIAN SERIES.

Furnished by the coöperation of His Excellency the Minister of Agriculture, Industry and Commerce, and the respective Observers.

Udine	.....	.....	30.07	763.6	41.7	5.4	94	Calm	0	0	.....	.....	10	.....	.....	0	0	.....	Prof. Giovanni Clodig.
Stelvio	22.04	559.8	30.15	765.7	23.4	— 4.8	.....	SW	.....	.....	6	.....	7	NE	.....	0	0	.....	Sig. Ernesta Manfredi.
Valdobbia	22.06	560.3	30.11	764.7	26.4	— 3.1	73	W	.....	.....	4	.....	7	SW	.....	0	0	.....	Ab. Dom. Mongini.
Padua	.....	.....	30.06	763.4	41.2	5.1	92	ESE	1.3	0.6	.....	.....	10	.....	.....	0	0	.....	Prof. Dott. Lorenzoni.
Vicenza	.....	.....	30.05	763.3	44.8	7.1	77	NE	0	0	.....	.....	7	.....	.....	0	0	.....	Conte Alm. Da Schio.
Verona	.....	.....	30.06	763.4	43.5	6.4	91	E	.....	.....	1	.....	10	.....	.....	0	0	.....	Dott. B. Bertoncelli.
Bergamo	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Prof. Trionfini Carlo.
Domodossola	.....	.....	30.08	764.0	41.0	5.0	95	Calm	.....	.....	0	.....	10	.....	.....	0.236	6.0	Raining	Prof. Giuseppe Calza.
Milan	.....	.....	30.07	763.7	40.6	4.8	98	ESE	.....	.....	1	.....	10	.....	.....	0.244	6.2	Raining	Ab. Gio. Capelli.
Pavia	.....	.....	30.07	763.6	40.5	4.7	89	NE	.....	.....	1	.....	10	.....	.....	0	0	.....	Prof. Gio. Cantoni.
Moncalieri	.....	.....	30.09	764.2	37.4	3.0	93	ENE	0	0	.....	.....	10	E	.....	0.134	3.4	Raining	Prof. P. F. Denza.
Mondovi	28.09	713.5	30.07	763.7	43.9	6.6	67	N	.....	.....	2	.....	8	.....	.....	0	0	.....	Prof. D. C. Bruno.
Porto Maurizio	.....	.....	30.03	762.8	57.4	14.1	77	ENE	.....	.....	4	.....	5	NE	.....	0	0	.....	Prof. L. Vassallo.
Genoa	.....	.....	30.03	762.8	55.2	12.9	71	SE	4.9	2.2	.....	.....	8	SE	.....	0	0	.....	Prof. G. M. Garibaldi.
Piacenza	.....	.....	30.08	764.0	38.1	3.4	98	NE	0.7	0.3	.....	.....	10	.....	.....	0	0	Foggy	Dott. G. Manzi.
Parma	.....	.....	30.07	763.8	39.4	4.1	92	SE	.....	.....	2	.....	10	.....	.....	0.010	0.4	Light rain	Prof. P. Pigorini.
Florence	.....	.....	30.08	764.0	54.5	12.5	75	SE	.....	.....	2	.....	10	SE	.....	0	0	.....	Cav. F. Meucci.
Leghorn	.....	.....	30.08	764.0	52.7	11.5	78	ENE	6.2	2.8	.....	.....	10	S	.....	0	0	.....	Prof. P. Monte.
Siena	28.84	732.6	30.08	763.9	49.6	9.8	81	E	2.4	1.1	.....	.....	10	S	.....	0	0	.....	Prof. L. Toscani.
Urbino	28.52	724.4	30.11	764.9	46.9	8.3	75	WSW	.....	.....	4	.....	1	.....	.....	0	0	.....	Prof. P. Serpieri.
Pesaro	.....	.....	30.08	764.1	40.8	4.9	88	N	13.0	5.8	.....	.....	1	N	.....	0	0	.....	Prof. Luigi Guidi.
Ancona	.....	.....	30.10	764.6	47.1	8.4	92	SE	.....	.....	2	.....	3	.....	.....	0	0	.....	Prof. F. De— Bosis.
Grosseto	.....	.....	30.08	764.1	56.5	13.6	79	ENE	.....	.....	4	.....	5	S	.....	0	0	.....	Avv. P. Ponticelli.
Rome	.....	.....	30.12	765.1	55.8	13.2	75	E	3.8	1.7	.....	.....	1	SW	.....	0	0	.....	Prof's. P. Secchi & L. Respighi.
Naples, O. U.	.....	.....	30.18	766.6	57.2	14.0	73	S	.....	.....	1	.....	0	.....	.....	0	0	.....	Prof. L. Palmieri.
Lecce	.....	.....	30.21	767.2	53.2	11.8	76	S	2.5	1.1	.....	.....	1	.....	.....	0	0	.....	Prof. C. De—Giorgi.
Cosenza	.....	.....	30.18	766.6	52.9	11.6	69	SSW	1.3	0.6	.....	.....	0	.....	.....	0	0	.....	Prof. F. D. Conti.
Cagliari	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Prof. A. Pacinotti.
Ilposto, (Sicily)	.....	.....	30.17	766.2	60.6	15.9	72	N	.....	.....	2	.....	4	S	.....	0	0	.....	Prof. F. Cafiero.
Palermo	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Prof. G. Cacciatore.
Caltanissetta	28 18	715.7	30.16	766.1	53.2	11.8	65	NW	.....	.....	1	.....	0	.....	.....	0	0	.....	Prof. A. Pagani.
Siracusa	.....	.....	30.12	765.1	60.1	15.6	75	E	.....	.....	1	.....	3	SW	.....	0	0	.....	Prof. V. Giuliano.
Sub-Series.																			
Naples, S. R.	.....	.....	30.19	766.8	54.0	12.2	76	ESE	0	0	.....	.....	2	E	.....	0	0	.....	Prof. F. Brioschi
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

Note.—The originals give the wind-force by the scale 0 to 4, or the velocity in kilometers per hour; generally, no distinction between upper and lower clouds; occasionally the weather in general terms. The elevation of Stelvio is 2,543.0 meters, or 8,342.9 feet; Valdobbia, 2,548.0 meters or 8,360.3 feet; Bergamo, 379.6 meters, or 1,245.3 feet; Mondovi, 556 meters, or 1,824.2 feet; Urbino, 451 meters, or 1,479.7 feet; Siena, 348.5 meters, or 1,143.3 feet; Caltanissetta, 570.3 meters, or 1,871.0 feet.

JAPANESE SERIES.

Tokei	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

MEXICAN SERIES.

By authority of the Secretary of Public Works.

Furnished by the coöperation of Senor Mariano Barcena, Director of the Central Meteorological Observatory in the City of Mexico.

Mexico	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Mariano Barcena.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Vicente Reyes.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Miguel Perez.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	(Engineers in charge.)

Note.—The elevation of Mexico is 2,290 meters, or 7,512.9 feet. The rain-fall is measured at 6 a. m., local time.

NETHERLANDS' SERIES.

Furnished by the coöperation of Professor Buys Ballot, Director of the Royal Meteorological Institute of the Netherlands at Utrecht.

Flushing	.....	.....	29.10	739.1	54.0	12.2	.....	W	.....	.....	7	.....	.....	.....	.....	0	0	.....	
Groningen	.....	.....	28.88	733.5	52.7	11.5	.....	S	.....	.....	7	.....	.....	.....	.....	0.020	0.5	.....	
Helder	.....	.....	28.82	732.0	49.8	9.9	.....	SSW	.....	.....	7	.....	.....	.....	.....	0.209	5.3	.....	
Utrecht	.....	.....	28.99	736.4	54.1	12.3	63	SSW	.....	.....	7	.....	8	.....	.....	0	0	Very cloudy	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

Note.—The originals give the wind-pressure in kilograms per square meter; for Utrecht, they give the weather as published, from which the amount of cloudiness is taken by the scale 0 to 4, without distinguishing between upper and lower clouds. It is assumed that the barometer readings have been reduced to sea-level.

NORWEGIAN SERIES.

Furnished by the coöperation of Professor H. Mohn, Director of the Royal Norwegian Meteorological Institute at Christiania.

Bergen	.....	.....	28.93	734.8	30.2	— 1.0	65	NNW	13.7	6.1	.....	.....	2	.....	.....	0	0	.....	
Brönö	.....	.....	29.00	736.7	21.6	— 5.8	90	SE	18	8	.....	.....	10	.....	.....	.....	.....	Snowing	
Christiania	.....	.....	29.01	736.9	25.2	— 3.8	95	NNE	7.2	3.2	.....	.....	10	.....	.....	0.037	0.9	Snowing	
Tromsö	.....	.....	29.28	743.8	14.9	— 9.5	59	SE	11	5	.....	.....	0	.....	.....	0	0	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols. The cloudiness and weather at Bergen refer to 2h., p. m., local time, instead of 1h., 4 min.

PORTUGUESE SERIES.

Furnished by the coöperation of J. C. de Brito Capello, Director of the Meteorological Observatory of the Infante Don Luiz at Lisbon.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Angra, (Azores,)	.....	.....	29.56	750.7	58.1	14.5	91	W	15.4	6 9	.....	.....	6	.....	.....	0.764	19.4	.....	Dr. J. A. Sampaio.
Campo Major	.....	.....	29.88	759.0	53.6	12.0	74	SW	3.1	1.4	.....	.....	9	SW	.....	0.327	8.3	.....	Dr. A. M. R. dos Santos.
Funchal, (Madeira,)	.....	.....	30.09	764.2	62.4	16.9	67	W	8.1	3.6	.....	.....	9	.....	.....	0	0	.....	Capt. D. A. de Cunha.
Lisbon	.....	.....	29.90	759.4	53.1	11.7	92	SW	4.9	2.2	.....	.....	9	.....	.....	0.642	16.3	Raining	The Observatory.
Ponta Delgada, (Azores)	.....	.....	29.68	753.9	60.1	15.6	93	SW	25.5	11.4	.....	.....	10	.....	.....	0.252	6.4	Raining	

Note.—The originals give the wind-velocity in kilometers per hour; occasionally, the weather by the Vienna symbols; the amount of cloudiness without distinguishing between upper and lower clouds; the barometer corrected but not reduced to sea-level. The rain-fall at Libson is measured at noon, instead of 0 h. 6 m., p. m.

RUSSIAN SERIES.

Furnished by the coöperation of Professor H. Wild, Director of the Imperial Central Physical Observatory of Russia, at St. Petersburg.

Warsaw	.....	.....	29.62	749.8	41.0	5.0	76	S	11	5	.....	.....	10	.....	.....	.....	.....	.....	Astronomical Obs.
Wilna	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Astronomical Obs.
Dorpat	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Physical Cabinet.
St. Petersburg	.....	.....	29.11	739.5	33 6	0.9	90	WNW	7	3	.....	.....	10	.....	.....	Blank	Blank	.....	Central Physical Obs.
Kuopio	.....	.....	28.98	736.0	28.2	— 4.9	96	WNW	16	7	.....	.....	10	.....	.....	.....	.....	.....	Ch. Forsten.
Kieff	.....	.....	28.97	735.8	9.9	—12.3	96	ENE	13	6	.....	.....	8	.....	.....	.....	.....	.....	Physical Cabinet.
Nikolaiev	.....	.....	29.65	753.2	39.2	4.0	77	W	7	3	.....	.....	6	.....	.....	.....	.....	.....	Kurdakof.
Kertch	.....	.....	29.89	759.3	37.2	2.9	100	S	13	6	.....	.....	10	.....	.....	.....	.....	Foggy	Lagorio.
Moscow	.....	.....	30.06	763.4	46.6	8.1	89	SSE	11	5	.....	.....	10	.....	.....	.....	.....	.....	Meteorological Obs.
Lugan	.....	.....	29.27	743.4	36.0	2.2	82	S	0	0	.....	.....	10	.....	.....	.....	.....	.....	Meteorological Obs.
Archangel	.....	.....	29.82	757.4	35.8	2.1	87	SSW	22	10	.....	.....	10	.....	.....	.....	.....	.....	Ogorodnikof.
Tiflis	.....	.....	29.32	744.7	— 1.5	—18.6	86	E	18	8	.....	.....	10	.....	.....	.....	.....	.....	Physical Observatory.
Astrakhan	28.82	731.9	30.28	769.0	45.3	7.4	77	S	4	2	.....	.....	8	.....	.....	.....	.....	.....	Sebastianof.
Kasan	.....	.....	30.14	765.6	35.2	1.8	91	SW	4	2	.....	.....	10	.....	.....	.....	.....	.....	Physical Cabinet.
Orenburg	.....	.....	29.65	753.0	6.1	—14.4	98	S	18	8	.....	.....	10	.....	.....	.....	.....	Light snow	Tschernischef.
Ekaterinburg	.....	.....	30.77	781.5	— 9.6	—23.1	58	E	16	7	.....	.....	5	.....	.....	.....	.....	.....	Meteorological Obs.
Nukuss	28.87	733.3	29.92	760.0	— 1.3	—18.5	68	SW	22	10	.....	.....	0	.....	.....	.....	.....	.....	
Kisaly	.....	.....	30.26	768.6	33.4	0.8	85	NE	4	2	.....	.....	10	.....	.....	.....	.....	.....	Bobrof.
Tashkend	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Michelson.
Barnaul	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Meteorological Obs.
Yeniselsk	.....	.....	30.08	763.9	— 5.8	—21.0	83	NE	4	2	.....	.....	10	.....	.....	.....	.....	.....	Marks.
Irkutsk	.....	.....	30.04	763.0	-18.8	—28.2	78	SSW	2	1	.....	.....	0	.....	.....	.....	.....	.....	Usolsef.
Peking, (China)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Physical Observatory.
Nertchinsk	.....	.....	30.47	773.9	14.0	—10.0	35	N	9	4	.....	.....	0	.....	.....	.....	.....	.....	Meteorological Obs.
Vladivostock	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Nikolaievsk, on the Amoor	.....	.....	.....	.....	22.6	— 5.2	.....	Calm	0	0	.....	.....	10	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols; they omit the rain-fall. The elevation of Tiflis is 409 meters, or 1,341.8 feet; Ekaterinburg, 306.4? m., or 1,005.2? ft.; Tashkend, 494.2? m., or 1,621.3? ft.; Irkutsk, 392 m., or 1,286 ft.; Nertchinsk, 592.0? m., or 1,942.2? ft.; Oorga, 1,281.0? m., or 4,202.6? ft.

SPANISH SERIES.

Furnished by the coöperation of Antonio Aguilar, Director of the Royal Observatory at Madrid, and of Don Cecilio Pujazon, Captain R. N. Director of the Naval Observatory at San Fernando.

Madrid	.....	.....	29.84	757.9	51.1	10.6	78	SW	22.4	10.00	.....	0	8	.....	.....	0.197	5.0	Cloudy	Royal Observatory.
San Fernando	.....	.....	29.96	760.9	59.0	15.0	80	WSW	5.8	2.6	.....	0	10	.....	SW	0.224	5.7	.....	Naval Observatory.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

Note.—The originals give the weather in general terms, as published; rain-fall for San Fernando from preceding to following midnight; wind-velocity for Madrid in kilometers per hour.

SWEDISH SERIES.

Furnished by the coöperation of Professor R. Rubenson, Director of the Royal Swedish Meteorological Institute, at Stockholm, and of Dr. H. H. Hildebrandsson, Chief of the Meteorological Division of the Upsala Observatory.

Haparanda	.....	.....	29.22	742.1	8.6	—13.0	100	NE	.....	.....	4	.....	10	.....	.....	.....	.....	Snowing	
Umea	.....	.....	29.18	741.1	5.7	—14.6	100	N	.....	.....	4	.....	10	.....	.....	.....	.....	Snowing	
Hernosand	.....	.....	29.11	739.4	15.8	— 9.0	97	NE	.....	.....	2	.....	10	.....	.....	0.079	2.0	Snowing	
Stockholm	.....	.....	29.03	737.4	26.2	— 3.2	91	ENE	.....	.....	2	.....	10	.....	.....	0.307	7.8	.....	
Wisby	.....	.....	29.08	738.7	40.3	4.6	94	SW	.....	.....	4	.....	10	.....	.....	0.303	7.7	.....	
Sub-Series.																			
Upsala	.....	.....	29.06	738.2	25.5	— 3.6	98	N	0	0	.....	.....	10	.....	.....	0.383	9.73	.....	Dr. Hildebrandsson.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

Note.—The originals give the wind-force by the scale 0 to 6, and Upsala also velocity in meters per second; occasionally, the weather by the Vienna symbols, or in general terms; no distinction between the amount of upper and lower clouds. The rain-fall is measured at 8 a. m., local time.

SWISS SERIES.

Furnished by the coöperation of Professor R. Wolf, Director of the Observatory at Zurich, and of Professor E. Plantamour, Director of the Observatory at Geneva.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Geneva	28.25	717.5	29.66	753.4	58.6	14.8	38	SSW			4		10			0	0	Covered	The Observatory.
Zurich	28.04	712.1	29.67	753.6	55.6	13.1	45	NW			1		8			0	0	Cloudy	The Observatory.

Note.—For Geneva the corresponding departures from the normal values are: Barometer, —10.2 mm; Thermometer, +13.3 cent.; Relative Humidity, —42 per cent.

Note.—The rain-fall is measured at Zurich at 7 a. m., on the following day. The originals give the barometer corrected but not reduced to sea-level; the wind-force by the scale 0 to 4 for Zurich; the amount of cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The elevation of Geneva is 408 meters, or 1,339 feet, and that of Zurich 470 meters, or 1,542 feet.

TURKISH SERIES.

Furnished by the coöperation of A. Coumbary, Effendi, Director of the Central Observatory at Constantinople, and of Professor C. V. A. Van Dyck, Superintendent of the Lee Observatory at Beirut.

Constantinople			30.11	764.7	50.5	10.3	74	SW	12	5.5			7		WNW	0	0		
Fao, (Persian Gulf)																			
Salonica			30.13	765.4	65.8	18.8		E			1		0						
Valona			30.15	765.8	61.2	16.2		S			1		0						
Varna			29.92	760.0	55.4	13.0		N			2		0						
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y			30.15	765.7	65.8	18.8	64	SW			1		2c,ck,k			0	0	*D. clouds	Prof. C. V. A. Van Dyck.

Note.—The originals give the wind-force by the scale 0 to 7, (except Beirut, by the scale 0 to 12, and Constantinople velocity in meters per second;) the weather in general terms as published; no distinction between upper and lower clouds, and, except Constantinople and Beirut, the amount by the scale 0 to 4. It is assumed that the barometer is reduced to sea-level. * Detached clouds.

CANADIAN SERIES.

Furnished by the coöperation of Professor G. T. Kingston, Director of the Magnetic Observatory at Toronto, and Superintendent of the Meteorological Office of the Dominion of Canada, and the respective Observers. Those marked with a star (*) are also telegraphed daily to the office of the Chief Signal Officer, U. S. Army.

Bathurst, N. B																			Hon. J. Ferguson.
Brockville, Ontario			30.21	767.3	— 6	—21.1		Calm	0	0		Haze	5s		SW	0	0	Fair	W. R. Bigg.
*Chatham, N. B			29.52	749.8	8	—13.3	93	SW	12	5.4		0	0			0	0	Clear	G. A. Blair.
Charlottetown, P. E. Island			29.53	750.0	8	—13.3	80	W	10	4.5		0	0			0	0	Clear	H. J. Cundall, C. E.
Cornwall, Ontario			30.15	765.8	3.9	—15.6	95	W			1	4ck	3s	W		0	0	Fair	James Smith, M. A.
Dalhousie, N. B			29.97	761.2				W			4					0.30	7.6	Overcast	H. A. Johnson.
Esquimault, B. C			30.36	771.1	45.3	7.4	100	SE				3cs	0			0	0	Clear	W. H. Bevis.
Fredericton, N. B			29.75	755.6	7.8	—13.4	70	NW	18	8.0		0	0			0	0	Fair	Prof. Harrison.
*Fort Garry, Manitoba			30.38	771.6	—24	—31.1	100	NW	7	3.1		5k	0	N		0	0	Fair	James Stewart.
Goderich, Ontario			30.09	764.3	14.0	—10.0	81	Calm			0		10n			0.10	2.5	Dull	H. J. Strang, M. A.
Granton, Ontario	28.86	733.0	30.06	763.5	10.6	—11.9		SE			2		10n			0	0	Cloudy	James Grant.
*Halifax, N. S			29.68	753.9	16	— 8.9	91	W	22	9.8			8n			0	0	Fair	F. Allison, M. A.
Hamilton, Ontario			30.14	765.5	12.5	—10.8	92	W			1	9ck	0			0	0	Cloudy	G. Dickson.
Heart's Content, N. F			29.30	744.2	25.0	— 3.9	87	NW			4		10			Inap.	Inap.	Snowy	E. Weedon.
*Kingston, Ontario			30.25	768.3	1	—17.2	85	N			2	5	0	N		0	0	Fair	S. Woods, M. A.
*Montreal, Quebec			30.09	764.3	5	—15.0	75	W	24	10.7		0	2cs			Inap.	Inap.	Fair	C. H. McLeod, C. E.
*Ottawa, Ontario			30.26	768.6	— 2	—18.9	90	W	6	2.7		5 c	Haze	W	N	0	0	Fair	J. B. Hiney.
*Parry Sound, Ontario			30.11	764.8	9	—12.8	74	E	7	3.1		8k	k	NE	NE	0	0	Cloudy	Rev. R. Mosley.
Port Dover, Ontario			30.13	765.3	14	—10.0	84	S	6	2.7		10k	0	SW		Inap.	Inap.	Cloudy	H. Morgan.
Port Hastings, N. S			29.54	750.3	14.8	— 9.6		NW	20	8.9						0	0	Fine	Peter Grant.
Port Stanley, Ontario			30.09	764.3	15	— 9.4	82	E	10	4.5			10k		SW	Inap.	Inap.	Cloudy	M. Payne.
*Quebec, Quebec			29.92	760.0	10	—12.2	79	NW	6	2.7			10n		NW	0	0	Cloudy	Capt. Ashe, R. N.
Rockliffe, Ontario			30.19	766.8	— 1	—18.3	94	W	2	0.9			10s		NW	0	0	Cloudy	
St. John, N. B			29.76	755.9	10	—12.2	79	NW	12	5.4		0	0			0	0	Fine	G. Murdoch, C. E.
*Saugeen, Ontario			30.05	763.3	15	— 9.4	79	S	4	1.8			10ks			0.01	0.3	Cloudy	K. Stewart.
Stayner, Ontario			30.13	765.3	17	— 8.3	85	SE	3	1.3		8k	0	SW		0	0	Cloudy	R. J. Cole.
Stratford, Ontario	28.69	728.7	30.09	764.3	9.5	—12.5	94	SE	2	0.9			10s			0.10	2.5	Cloudy	C. J. MacGregor, M. A.
*Sydney, C. B			29.60	749.3	15	— 9.4	84	W	15	6.7			10n		W	0.02	0.5	Cloudy	T. C. Hill.
*Toronto, Ontario			30.12	765.0	17	— 8.3	85	W	7	3.1			10n		W	Inap.	Inap.	Cloudy	Magnetic Observatory.
Woodstock, Ontario			30.08	764.0	8.7	—12.9	79	SE	6	2.7			10s			0.05	1.3	Cloudy	J. Montgomery.
Sub-Series.																			
St. Johns, Newfoundland			29.37	746.0	25.0	— 3.9	100	SW				10	10			0.02	0.5	Fair	John Delany.

Note.—The originals for Brockville, Charlottetown, Port Dover, Port Stanley, St. Johns, N. F., Stayner and those telegraphed, give the cloudiness by the scale 0 to 4. The elevation of Granton is 1,015 feet, or 309.4 m.; Stratford, 1,182 feet, or 360.8 m.

UNITED STATES SERIES.

Furnished by the coöperation of Bvt. Brig. Gen. Albert J. Myer, Chief Signal Officer, U. S. Army.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Albany, N. Y.	.....	.....	30.11	764.8	16	— 8.9	83	Calm	0	0	.....	2k	2s	SW	.....	Inap.	Inap.	Fair	
Alpena, Mich.	.....	.....	29.99	761.7	15	— 9.4	82	SW	10	4.5	.....	.....	10s	.....	.....	Inap.	Inap.	Cloudy	
Atlantic City, N. J.	.....	.....	30.17	766.3	16	— 8.9	83	W	6	2.7	.....	5cs	0	W	.....	0	0	Fair	
Augusta, Ga.	.....	.....	29.77	756.1	32	0.0	95	E	4	1.8	.....	.....	10n	.....	E	0.56	14.2	Heavy rain	
Baltimore, Md.	.....	.....	30.10	766.8	17	— 8.3	83	NW	3	1.3	.....	.....	10s	.....	.....	0	0	Cloudy	
Barnegat, N. J.	.....	.....	30.15	765.8	18	— 7.8	83	NW	8	3.6	.....	8k	0	W	.....	0	0	Cloudy	
Bismarck, Dakota	28.33	719.6	30.21	767.3	—10	—23.3	76	NE	3	1.3	.....	.....	10n	.....	NE	0.07	1.8	Light snow	
Boston, Mass.	.....	.....	30.02	762.5	20	— 6.7	70	W	7	3.1	.....	5cs	0	W	.....	0	0	Fair	
Breckenridge, Minn.	.....	.....	30.32	770.1	—20	—28.9	64	NW	12	5.4	.....	0	10ks	.....	NW	0	0	Cloudy	
Buffalo, N. Y.	.....	.....	30.12	765.0	14	—10.0	63	S	6	2.7	.....	8ck	2s	SW	.....	0.01	0.3	Cloudy	
Burlington, Vt.	.....	.....	30.12	765.0	13	—10.6	66	S	1	0.4	.....	5c	0	.....	.....	0	0	Fair	
Cairo, Ill.	.....	.....	30.08	764.0	20	— 6.7	85	N	11	4.9	.....	.....	10s	.....	.....	0	0	Cloudy	
Cape Hatteras, N. C.	.....	.....	29.99	761.7	38	3.3	80	NE	19	8.5	.....	2cs	5s	SW	SE	0	0	Cloudy	
Cape Henry, Va.	.....	.....	30.14	765.5	31	— 0.6	79	E	16	7.2	.....	.....	10s	.....	.....	0	0	Cloudy	
Cape Lookout, N. C.	.....	.....	30.04	763.0	33	0.6	89	NE	18	8.0	.....	.....	10ks	.....	SE	0	0	Threatening	
Cape May, N. J.	.....	.....	30.18	766.6	20	— 6.7	70	N	14	6.3	.....	2ck	0	NW	.....	0	0	Fair	
Charleston, S. C.	.....	.....	29.80	756.9	42	5.6	91	N	14	6.3	.....	.....	10n	.....	.....	0.75	19.1	Heavy rain	
Cheyenne, Wyoming	23.97	608.8	29.91	759.7	27	— 2.8	67	NW	36	16.1	.....	0	1s	.....	.....	0	0	Clear	
Chicago, Ill.	.....	.....	30.01	762.2	6	—14.4	76	SW	10	4.5	.....	0	0	.....	.....	Inap.	Inap.	Clear	
Cincinnati, Ohio	.....	.....	29.98	761.5	16	— 8.9	83	SE	2	0.9	.....	.....	10s	.....	.....	0	0	Cloudy	
Cleveland, Ohio	.....	.....	30.07	763.8	11	—11.7	79	ESE	11	4.9	.....	.....	10s	.....	S	Inap.	Inap.	Cloudy	
Corsicana, Tex.	.....	.....	30.31	769.9	16	— 8.9	83	NW	2	0.9	.....	0	0	.....	.....	1.03	26.2	Clear	
Davenport, Iowa	.....	.....	30.15	765.8	— 2	—18.9	83	NW	12	5.4	.....	0	0	.....	.....	0.05	1.3	Clear	
Denison, Tex.	.....	.....	30.30	769.6	17	— 8.3	67	N	8	3.6	.....	0	0	.....	.....	0.25	6.3	Clear	
Denver, Col.	24.78	629.4	30.00	762.0	23	— 5.0	73	S	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Detroit, Mich.	.....	.....	30.00	762.0	14	—10.0	81	S	1	0.4	.....	10cs	0	W	.....	Inap.	Inap.	Cloudy	
Dodge City, Kan.	27.49	698.2	30.01	762.2	9	—12.8	78	NW	14	6.3	.....	2c	0	NW	.....	0	0	Clear	
Dubuque, Iowa	.....	.....	30.14	765.5	— 3	—19.4	66	Calm	0	0	.....	.....	10s	.....	.....	0.05	1.3	Cloudy	
Duluth, Minn.	.....	.....	30.08	764.0	— 2	—18.9	84	SW	6	2.7	.....	0	5s	.....	W	0.04	1.0	Fair	
Eastport, Me.	.....	.....	29.80	756.9	11	—11.7	79	W	16	7.2	.....	0	Haze	.....	.....	0	0	Clear	
Erie, Pa.	.....	.....	30.07	763.8	14	—10.0	81	SE	12	5.4	.....	.....	10s	.....	.....	0.01	0.3	Cloudy	
Escanaba, Mich.	.....	.....	29.94	760.5	13	—10.6	81	Calm	0	0	.....	.....	10s	.....	.....	0.03	0.8	Cloudy	
Fort Gibson, Indian Ter.	.....	.....	30.23	767.8	4	—15.6	74	E	4	1.8	.....	0	Fog	.....	.....	0	0	Clear	
Ft. St. Michael, Alaska	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Fort Sill, Indian Ter.	28.96	735.6	30.16	766.1	24	— 4.4	48	NW	10	4.5	.....	0	0	.....	.....	0	0	Clear	
Fort Sully, Dakota	28.37	720.6	30.22	767.6	3	—16.1	100	NE	8	3.6	.....	.....	10n	.....	.....	0.22	5.6	Heavy snow	
Florence, Arizona	28.65	727.7	30.25	768.3	39	3.9	.....	NE	.....	.....	.....	0	0	.....	.....	0	0	Clear	
Galveston, Tex.	.....	.....	30.28	769.1	31	— 0.6	79	NW	28	12.5	.....	0	0	.....	.....	0.76	19.3	Clear	
Grand Haven, Mich.	.....	.....	29.90	759.4	22	— 5.6	93	SE	5	2.2	.....	.....	10s	.....	SW	0.08	2.0	Cloudy	
Indianapolis, Ind.	.....	.....	30.01	762.2	12	—11.1	80	Calm	0	0	.....	0	Sm'e	.....	.....	0	0	Smoky	
Indianola, Tex.	.....	.....	30.37	771.4	30	— 1.1	79	NW	9	4.0	.....	0	0	.....	.....	0.01	0.3	Clear	
Jacksonville, Fla.	.....	.....	29.64	752.6	61	16.1	94	S	14	6.3	.....	.....	10n	.....	.....	0.35	8.9	Light rain	
Keokuk, Iowa	.....	.....	30.13	765.3	2	—16.7	72	N	8	3.6	.....	0	0	.....	.....	0	0	Clear	
Key West, Fla.	.....	.....	29.87	758.7	72	22.2	90	SE	20	8.9	.....	0	5ks	.....	.....	0	0	Fair	
Kittyhawk, N. C.	.....	.....	30.12	765.0	36	2.2	70	NE	13	5.8	.....	.....	10s	.....	.....	0	0	Cloudy	
Knoxville, Tenn.	.....	.....	29.87	758.7	23	— 5.0	86	NW	12	5.4	.....	.....	10n	.....	N	0.66	16.8	Heavy snow	
La Crosse, Wis.	.....	.....	30.10	764.5	2	—16.7	72	W	6	2.7	.....	.....	10s	.....	W	0.01	0.3	Cloudy	
Leavenworth, Kan.	.....	.....	30.14	765.5	22	— 5.6	85	NW	6	2.7	.....	.....	10s	.....	NW	0	0	Cloudy	
Louisville, Ky.	.....	.....	30.00	762.0	17	— 8.3	67	SE	2	0.9	.....	.....	10s	.....	.....	0	0	Cloudy	
Lynchburg, Va.	.....	.....	30.16	766.1	20	— 6.7	85	Calm	0	0	.....	.....	10s	.....	.....	0	0	Cloudy	
Malone, N. Y.	.....	.....	30.14	765.5	8	—13.3	78	Calm	0	0	.....	5cs	0	W	.....	0	0	Fair	
Marquette, Mich.	.....	.....	29.94	760.5	17	— 8.3	67	SW	4	1.8	.....	.....	10s	.....	.....	0	0	Cloudy	
Memphis, Tenn.	.....	.....	30.04	763.0	24	— 4.4	72	N	8	3.6	.....	.....	10s	.....	NW	0.45	11.4	Cloudy	
Milwaukee, Wis.	.....	.....	29.96	761.0	12	—11.1	80	W	10	4.5	.....	.....	10s	.....	.....	0.03	0.8	Cloudy	
Mobile, Ala.	.....	.....	29.76	755.9	35	1.7	95	NW	10	4.5	.....	.....	10n	.....	N	1.32	33.5	Light rain	
Montgomery, Ala.	.....	.....	29.73	755.1	35	1.7	90	W	2	0.9	.....	.....	10n	.....	.....	0.78	19.8	Sleeting	
Morgantown, W. Va.	28.94	735.1	30.09	764.3	13.5	—10.3	81	Calm	0	0	.....	.....	10s	.....	.....	Inap.	Inap.	Threatening	
Mt. Washington, N. H.	23.25	590.5	29.61	752.1	— 3	—19.4	100	NW	50	22.4	.....	.....	Fog	.....	.....	0	0	Foggy	
Nashville, Tenn.	.....	.....	29.96	761.0	22	— 5.6	86	N	2	0.9	.....	.....	10n	.....	.....	0.22	5.6	Light snow	
New Haven, Conn.	.....	.....	30.12	765.0	21	— 6.1	70	W	5	2.2	.....	2ck	Haze	.....	.....	0	0	Clear	
New London, Conn.	.....	.....	30.12	765.0	21	— 6.1	71	SW	4	1.8	.....	2cs	Haze	SW	.....	0	0	Fair	
New Orleans, La.	.....	.....	29.88	758.9	38	3.3	71	NW	20	8.9	.....	.....	10ks	.....	NW	2.60	66.0	Cloudy	
Newport, R. I.	.....	.....	30.10	764.5	21	— 6.1	72	W	16	7.2	.....	2c	1ks	W	W	0	0	Fair	
New York, N. Y.	.....	.....	30.17	766.3	15	— 9.4	64	W	7	3.1	.....	2cs	0	.....	.....	0	0	Clear	
Norfolk, Va.	.....	.....	30.14	765.5	28	— 2.2	88	NE	6	2.7	.....	.....	10s	.....	.....	0	0	Cloudy	
North Platte, Neb.	27.04	686.8	29.73	755.1	23	— 5.0	86	W	14	6.3	.....	.....	10s	.....	.....	0	0	Cloudy	
Omaha, Neb.	29.02	737.1	30.21	767.3	8	—13.3	66	N	12	5.4	.....	.....	10s	.....	N	0.01	0.3	Cloudy	
Oswego, N. Y.	.....	.....	30.15	765.8	19	— 7.2	84	Calm	0	0	.....	Haze	2s	W	W	Inap.	Inap.	Cloudy	
Pembina, Dakota	.....	.....	30.39	771.9	-27	—32.8	48	NW	5	2.2	.....	.....	10s	.....	.....	0	0	Cloudy	
Philadelphia, Pa.	.....	.....	30.18	766.6	16	— 8.9	83	NW	14	6.3	.....	5cs	Haze	SW	.....	0	0	Cloudy	
Pike's Peak, Col.	17.62	447.5	29.84	757.9	7.5	—13.6	21	NE	35	15.6	.....	5c	0	.....	.....	Inap.	Inap.	Clear	
Pittsburgh, Pa.	.....	.....	30.09	764.3	8	—13.3	100	SW	2	0.9	.....	.....	Fog	.....	.....	0	0	Foggy	
Port Huron, Mich.	.....	.....	30.02	762.5	13	—10.6	81	SE	4	1.8	.....	.....	10s	.....	.....	0.02	0.5	Hazy	
Portland, Me.	.....	.....	29.95	760.7	15	— 9.4	82	W	7	3.1	.....	0	0	.....	.....	0	0	Clear	
Portland, Oregon	.....	.....	30.39	771.9	39	3.9	100	S	2	0.9	.....	.....	10s	.....	.....	0	0	Cloudy	
Punta Rassa, Fla.	.....	.....	29.81	757.2	68.0	20.0	92	S	32	14.3	.....	.....	10s	.....	S	Inap.	Inap.	Cloudy	
Rochester, N. Y.	.....	.....	30.11	764.8	15	— 9.4	83	W	6	2.7	.....	.....	10s	.....	W	Inap.	Inap.	Cloudy	
Salt Lake City, Utah	25.94	658.9	30.27	768.8	16	— 8.9	88	NE	6	2.7	.....	.....	10s	.....	.....	0	0	Cloudy	
Sandy Hook, N. J.	.....	.....	30.13	765.3	17	— 8.3	83	W	16	7.2	.....	0	0	.....	.....	0	0	Clear	
San Diego, Cal.	.....	.....	30.21	767.3	49	— 9.4	82	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
San Francisco, Cal.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Santa Fé, N. M.	23.38	593.8	29.92	760.0	12	—11.1	61	N	5	2.2	.....	0	0	.....	.....	0	0	Clear	
Savannah, Ga.	.....	.....	29.89	754.1	46	7.8	100	SE	4	1.8	.....	.....	10n	.....	.....	0.86	21.8	Heavy rain	
Shreveport, La.	.....	.....	30.26	768.6	21	— 6.1	85	W	2	0.9	.....	0	0	.....	.....	0.87	22.1	Clear	
Smithville, N. C.	.....	.....	29.94	760.5	37	2.8	80	N	18	8.0	.....	.....	10ks	.....	SE	0	0	Threatening	
Springfield, Mass.	.....	.....	30.09	764.3	25	— 3.9	74	W	8	3.6	.....	8ck	2s	SW	.....	Inap.	Inap.	Fair	
St. Louis, Mo.	.....	.....	30.13	765.3	14	—10.0	81	N	8	3.6	.....	0	0	.....	.....	0	0	Clear	
St. Marks, Fla.	.....	.....	29.62	752.3	52	—11.1	100	W	6	2.7	.....	.....	10s	.....	.....	0.20	7.4	Cloudy	
St. Paul, Minn.	.....	.....	30.14	765.5	— 6	—21.1	61	W	8	3.6	.....	0	0	.....	.....	Inap.	Inap.	Clear	
St. Paul's Island, Alaska	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Thatcher's Island, Mass.	.....	.....	30.01	762.2	19	— 7.2	64	W	12	5.4	.....	0	0	.....	.....	0	0	Clear	
Toledo, Ohio	.....	.....	30.01	762.2	19	— 7.2	84	S	2	0.9	.....	.....	10s	.....	S	0	0	Cloudy	
Tucson, Arizona	.....	.....	30.32	770.1	26	— 3.3	.....	S	.....	.....	.....	0	0	.....	.....	0	0	Clear	
Tybee Island, Ga.	27.77	705.4	29.97	753.6	46	7.8	100	NE	15	7.4	.....	.....	10n	.....	.....	1.50	38.1	Heavy rain	
Vicksburg, Miss.	.....	.....	30.06	763.5	27.5	— 2.5	100	N	11	4.9	.....	.....	10n	.....	.....	1.09	27.7	Light snow	
Virginia City, M. T.	24.30	617.2	29.78	756.4	36	2.2	53	SW	24	10.7	.....	5c	0	NW	.....	0	0	Fair	
Washington, D. C.	.....	.....	30.21	767.3	17	— 8.3	67	Calm	0	0	.....	.....	10s,sm'	.....	.....	0	0	Cloudy	
Wilmington, N. C.	.....	.....	30.01	762.2	31	— 0.6	68	NE	11	4.9	.....	.....	10n	.....	S	Inap.	Inap.	Light rain	

UNITED STATES SERIES.—Continued.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Wood's Holl, Mass.	.....	.....	30.09	764.3	24	— 4.4	61	NW	10	4.5	.....	0	0	.....	.....	0	0	Clear	
Yankton, Dakota	28.90	734.0	30.37	771.4	— 4	—20.0	65	N	4	1.8	.....	5cs	0	NW	.....	0.01	0.3	Fair	
Yuma, Arizona	.....	.....	30.30	769.6	44	6.7	.....	NE	.....	.....	.....	0	0	.....	.....	0.	0	Clear	
Sub-Series.																			
Kingston, Jamaica, W. I.	.....	.....	30.19	766.8	79	26.1	82	E	16	7.2	.....	8c	8s	E	E	0	0	.....	James Gall.
Navassa, W. I.	.....	.....	.....	.....	78	25.6	.....	E	.....	.....	4	.....	.....	.....	.....	0	0	Cloudy	F. M. Everett.
Clifton, Ja., W. I.	27.23	691.6	30.03	762.7	66	18.9	84	E	1.0	0.4	.....	5c	2k	E	.....	0.75	19.1	Fine	C. Partridge.
Paramaribo, D. Guiana, S.A.	.....	.....	30.04	763.0	79	26.1	87	E	.....	.....	2	10n?	8n	E	.....	0.120	30.5	Rainy	C. J. Hering.
Batavia, Dutch Guiana, S.A.	30.00	762.0	.....	.....	77.9	25.5	.....	E	.....	.....	.....	.....	.....	.....	.....	0	0	Cloudy	Dr. H. Groot.
Medellin, Colombia, S. A.	25.23	640.8	.....	.....	64.5	18.1	84	SW	.....	.....	2	0	3ks	.....	.....	0	0	Fair	Thomas Herran.
York Factory, B. A.	.....	.....	30.35	770.9	—31.5	—35.3	.....	W	11	4.9	.....	0	0	.....	.....	0	0	Clear	J. Fortescue, W. Wood.
Honolulu, Oahu, H. I.	.....	.....	30.09	764.3	73	22.8	95	NE	.....	.....	2	.....	.....	.....	.....	0	0	Clear	Daniel Smith.
Makawao, Maui, H. I.	.....	.....	29.97	761.2	58	14.4	81	Calm	.....	.....	0	0	0	.....	.....	0	0	.....	F. L. Clarke.

Marine Series.	True course towards.	Hourly rate in knots.	State of ocean.	Direction of swell from —	Weather.	Observer.
Schooner Addie Fuller, Tarpaulin Cove.	.....	.....	.....	.....	Clear	Capt. James Jorgensen.

Note.—The originals give the cloudiness by the scale 0 to 4, except York Factory, Medellin and Paramaribo. The elevation of the barometer at Bismarck is 1,677 feet or 511.1 meters; Cheyenne, 6,057.3 ft., or 1,846.2 m.; Clifton, about 2,892 ft., or 881.5 m.; Denver, 5,185 ft., or 1,565.2 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Florence, 1,550 (?) ft., or 472.5 (?) m.; Makawao, 2,205 ft., or 672.1 m.; Morgantown, 1,027.9 ft., or 313.3 m.; Medellin, 4,676 ft., or 1,486.2 m.; Mt. Washington, 6,285 ft., or 1,915.6 m.; North Platte, 2,846 ft., or 867.4 m.; Omaha, 1,054.6 ft., or 321.4 m.; Pike's Peak, 14,150.7 ft., or 4,313.1 m.; Salt Lake City, 4,362.2 ft., or 1,329.6 m.; Santa Fé, 6,862.2 (?) ft., or 2,091.6 (?) m.; Tucson, 2,513 (?) ft., or 772.1 (?) m.; Virginia City, 5,480 (?) ft., or 1,670.3 (?) m.; Yankton, 1,278 ft., or 389.5 m. The following constants are added in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Denver, 5.22 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fé, 6.54 in.; Tucson, 2.59 in.; Virginia City, 5.48 in. The elevation of Batavia is about 6 feet; the barometric readings need the addition of 0.2 mm. or 0.01 in. for reduction to sea-level.

UNITED STATES NAVAL SERIES.

By authority of the SECRETARY OF THE NAVY.

Furnished by the coöperation of the Navy Department, through Commodore Daniel Ammen, U. S. N., Chief of Bureau of Navigation.

STATIONS AND VESSELS.	TRUE COURSE TOWARDS.	HOURLY RATE IN KNOTS.	*BAROMETER AS REPORTED.		TEMPERATURE OF THE AIR.		RELATIVE HUMIDITY.	WIND.				CLOUDS.				RAIN-FALL OR MELTED SNOW IN THE PAST 24 HOURS.		STATE OF OCEAN.	DIRECTION OF SWELL FROM—	WEATHER.	OBSERVER.
								Direction.	Velocity		Force.	Amount.		Direction.							
												Up'er	Low'r	Up'er	Low'r						
			Inches.	Millimeters.	Fahrenheit.	Centigrade.	Per cent.	From—	Miles per hour.	Meters per second.	0—10.	0—10.	0—10.	From—	From—	Inches.	Millimeters.				
Naval Academy, Naval Hospital, Santee,	Annapolis, Md.																				
Monongahela, Balt'm're, Md.																					
Wabash, Boston, Mass.																					
Michigan, Erie, P.																					
Hartford, Hampton Rds., Va.																					
St. Louis, League Island, Pa.																					
Navy Yard, Mare Island, Cal.																					
Rio Bravo, Matamoras, Mex.																					
Alarm, New York, N. Y.																					
Colorado, New York, N. Y.																					
Franklin, New York, N. Y.																					
Intrepid, New York, N. Y.																					
Minnesota, New York, N. Y.																					
Swatara, New York, N. Y.																					
Canonicus, New Orleans, La.																					
Ossipee, New Orleans, La.																					
Essex, Norfolk, Va.																					
Navy Yard, Norfolk, Va.																					
Omaha, Panama																					
Pensacola, Panama																					
Navy Yard, Pensacola, Fla.																					
Plymouth, Pensacola, Fla.																					
Navy Yard, Portsmouth, NH.																					
Adams, Port Royal, S. C.																					
Ajax, Port Royal, S. C.																					
Catskill, Port Royal, S. C.																					
Dictator, Port Royal, S. C.																					
Huron, Port Royal, S. C.																					
Lehigh, Port Royal, S. C.																					
Manhattan, Port Royal, S.C.																					
New Hampshire, Port R., SC.																					
Navy Yard, Wash'gton, D. C.																					
Tallapoosa, Wash'gton, D. C.																					
Wyoming, Washington, D. C.																					

* It is not known that the barometer is corrected for temperature, instrumental error or elevation.

COLLATED AT THE OFFICE OF THE CHIEF SIGNAL OFFICER OF THE ARMY, WASHINGTON, D. C.

The records which appear in this Bulletin are copied from the regular exchanges of this office, made in each instance in compliance with an especial request, and are published for the uses of the coöperating observers. The barometric readings in the first two columns are reduced to freezing and their respective standards; those in the second two also to mean sea-level. The "weather" is generally published as given.

When the distinction between the upper and lower strata of clouds is not reported, the *kinds* or *types*, viz: cirrus, cumulus, stratus, nimbus, scud, fracto, pallio, haze, fog and smoke, as indicated, respectively, by the letters c, k, s, n, d, f, p, hz., fg. and sm'e, are generally published with the amount in the lower-cloud column. The distinction between the upper and lower strata is carefully made in the United States Series and a portion of the Canadian Series, and the types are indicated by the above letters or their combinations in the proper column.

Albert J. Myer

Brig. Gen. (Bvt. Asst.,) Chief Signal Officer, U. S. A.

BULLETIN

OF

INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON JANUARY 2, 1877.

7:35 A. M. WASHINGTON mean time.

0:7 A. M. MEXICO mean time.
7:7 A. M. SAN JOSE mean time.
0:6 P. M. LISBON mean time.
0:28 P. M. MADRID mean time.
0:43 P. M. GREENWICH mean time.
0:53 P. M. PARIS mean time.
1:1 P. M. BRUSSELS mean time.
1:4 P. M. UTRECHT mean time.
1:13 P. M. BERNE mean time.
1:26 P. M. CHRISTIANIA mean time.
1:33 P. M. COPENHAGEN mean time.
1:33 P. M. ROME mean time.
1:37 P. M. BERLIN mean time.
1:49 P. M. VIENNA mean time.
1:55 P. M. STOCKHOLM mean time.
2:18 P. M. ATHENS mean time.
2:39 P. M. CONSTANTINOPLE mean time.
2:44 P. M. ST. PETERSBURG mean time.

ALGERIAN SERIES.

Furnished by the coöperation of General d'Endeville, Commandant Supérieur du Génie in Algeria.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Nemours			30.12	765.1	63.9	17.7	35	Calm			0		3			0	0	Fair	Charnot.
Algiers			30.14	765.5	55.8	13.2		WSW			2		10			Inap.	Inap.	Hidden	Peter.
La Calle			30.16	766.0	61.9	16.6	80	NW			3		6			0	0	Fair	Fleury.
Tunis			30.21	767.3	67.6	19.8		W			2		1			0	0	Clear	Jacques.
Sfax																			
Saida			30.15	765.8	59.0	15.0	10	SW			1		2			0	0	Clear	Millot.
Tebessa			30.22	767.5	61.7	16.5		W			1		2			0	0	Clear	Bourgeois.
Geriville			30.17	766.2	52.3	11.3	39	SSW			1		4			0	0	Fair	Lemaillot.
Laghouat			30.11	764.8	62.6	17.0	27	W			1		1			0	0	Clear	Guyot.
Biskra			30.30	769.5	65.1	18.4	36	NE			1		0			0	0	Clear	Kuntz.

NOTE.—In the originals the distinction between the amount of upper and lower clouds is apparently not made. The weather is published as given. The rain-fall is measured at 7 a. m., local time.

AUSTRIAN SERIES.

Furnished by the coöperation of Professor Ferdinand Osnaghi, Director of the Imperial and Royal Central Meteorological Institute at Vienna.

Agram			29.89	759.1	55.0	12.8	68	SW			2		4			0	0		Prof. Ivan Stozir.
Cracow, I. R. Observatory			29.69	754.2	43.2	6.2	76	W			1		9			0	0		Dr. Wierzbiski.
Eperies			29.79	756.7	35.6	2.0	96	Calm			0		10			0	0	Foggy	Julius Mikolik.
Gratz	28.62	727.0	29.89	759.3	45.5	7.5	76	W			2		9			0	0		Andreas Rospini.
Hermannstadt	28.44	722.4	29.88	758.9	44.6	7.0	71	SE			1		6			0	0		Prof. Reissenberger.
Kremsmünster	*8.49	723.7	29.85	758.3	43.2	6.2	76	SW			2		10			0.047	1.2		Prof. C. Wagner.
Lemberg			29.65	753 0	42.4	5.8	82	SW			2		7			0	0		Dr. T. Stanecki.
Nyiregyhaza																			Habsuda Daniel.
Pola			29.97	761.2	55.9	13.3	89	SSE			2		10s			0	0	Foggy	I.R.Hydrographic Office.
Szegedin			29.88	758.9	41.5	5.3	74	S			2		5			0	0		Karl Stancel.
Trieste			29.97	761.3	54.0	12.2	89	Calm			0		10			0.016	0.4	Rain and fog	Prof. V. Faroli.
Vienna			29.82	757.4	34.2	1.2	96	Calm			0		9			0	0		I. R. Central Met. Obs'y.

NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 7 p. m., local time. The elevation of Gratz is 343.5 meters, or 1,126.9 feet; Hermannstadt, 407.8 meters, or 1,337.9 feet; Kremsmünster, 383.6 meters, or 1,258.5 feet.

BELGIAN SERIES.

Furnished by the cooperation of J. C. Houzeau, Director of the Royal Observatory at Brussels.

Arlon			29.78	756.3	43.5	6.4	92	SW			7		10			0.201	5.1		Royal Observatory.
Brussels			29.72	755.0	41.9	5.5	90	WNW			4		10		WNW	0.315	8.00	Raining	
Furnes			29.68	753.9	43.3	6.3	100	NNW			2		5			0.193	4.9		
Maeseyck			29.67	753.5	42.4	5.8	94	NW			3		10			0.38	9.7		

NOTE.—In the originals, the weather is occasionally given in general notes.

BRITISH SERIES

Furnished by the coöperation of Robert H. Scott, Esq., Director of the Meteorological Office, London, Alexander Buchan, Secretary of the Scottish Meteorological Society, Edinburgh, and the respective Observers.

STATIONS.	Barometer. Corrected for instrum't'al error and temperature. Inches.	Barometer. Corrected for instrum't'al error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Force. 0—10.	Clouds. Amount. Upper. 0—10.	Clouds. Amount. Lower. 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Aberdeen			29.66	753.4	32.0	0.0		W	7	3.1			1			0.020	0.51	Blue sky	William Boswell.
Ardrossan			29.70	754.4	34	1.1		ENE			2		1					*D. clouds	William McNeil.
Armagh, Observatory			29.67	753.6	34.5	1.4		SSW	3	1.3			1					*D. clouds	S. Call, for Dr. Robinson.
Birr Castle, (Parsonstown)			29.59	751.6	33.5	0.8		NE			1		3					*D. clouds	J. Dreyer.
Bradford			29.70	754.4	35.1	1.7		SW			1		0			0.27	6.9	Blue sky	J. McLandsborough.
Bridgetown, (Barbados)			29.98	761.5	84.4	29.1		NE			4		5					*D. clouds	Sergt. J. F. Halanen, A.
Cambridge, Observatory			29.72	754.9	40.0	4.4		N			1		1					*D. clouds	H. Todd. [H.C.
Cardington			29.74	755.4	38.4	3.6		E			1		4					*D. clouds	John McLaren.
Carlisle																			T. Pell, for J. Cartmell.
Chatham, School M. E.			29.72	754.9	44.2	6.8		Calm			0		2					Blue sky	Maj. C. N. Martin, R.E.
Dartmoor	28.14	714.7	29.67	753.6	38.6	3.7		SE			2		10					Overcast	R. E. Power.
Davos Platz, (Switzerland)	24.72	627.9			36.0	2.2	66	SW			1		3			0.12	3.0	Hazy	Francis Redford, M. A.
Donaghadee			29.67	753.6	40	4.4		SSE			2		0					Blue sky	J. Mac Gowan.
Dover			29.71?	754.6?	42	5.6		NNE			3		7					¾ clouded	J. Costello.
Eccles, (near Manchester)			29.69	754.1	36.5	2.5		NNW	0.	0.1								Hazy	Thomas Mackereth.
Falmouth, Observatory			29.56	750.8	46.4	8.0		ESE			5		10					Overcast	The Staff.
Fort Napier, (Natal)	27.40	698.2	29.72	754.9	59.9	15.5		E			1		10					Raining	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.95	760.7	85.0	29.4		N			0		4					*D. clouds	
Galway, Queen's College			29.53	750.0	33	0.6		NE			3		5					*D. clouds	Prof. A. H. Curtis.
Gibraltar, (Mediterranean)			30.15	765.8	65.0	18.3		W			2		5					*D. clouds	Corpl. C. Aitken, A. H.C.
Glasgow, Observatory			29.69	754.1	30.8	— 0.7		NE			1		6					Hazy	Lewis Stuart.
Great Yarmouth			29.70	754.4	40	4.4		NNW			3		3					Blue sky	G. T. Watson.
Greenwich, Royal Obs'y			29.72	754.9	38.3	3.5		ENE			1		4			Blank	Blank	*D. clouds	The Staff, for G. B. Airy.
Guernsey			29.63	752.6	49.5	9.7		SE			2		8					Raining	Dr. S. E. Hoskins.
Helston			29.55	750.6	49	9.4		E			6		10n			0	0	Overcast	M. P. Moyle.
Holyhead			29.65	753.1	38	3 3		SE			2		1					Blue sky	John Tilston.
Kew, Observatory			29.72	754.9	37.9	3.3		NNE	2	0.9								Foggy	The Staff.
Kingstown			29.63	752.6	41	5.0		SSE			4		5					*D. clouds	George Mitchell.
Leicester Museum			29.71	754.6	36.3	2.4		NE			2		6					*D. clouds	Wm. J. Harrison, F.G.S.
Malta, (Mediterranean)			30.12	765.0	65.0	18.3		SW			1		2k					*D. clouds	Corp'l. P. Bravis, A.H.C.
Natal			29.65	753.1	29	— 1.7		NW			1		0					Clear	W. D. Penny.
Nassau, (Bahamas)			30.10	764.5	63.5	17.5		NW			7		5					*D. clouds	Surg. Maj. Henry.
Nottingham, Observatory			29.74	755.4	36.7	2.6		SE			1		0			0.06	1.6	Blue sky	F. J. Lowe, F. R. S.
Oscott, St. Mary's College			29.72	754.9	37.7	3.2		ENE			1		5cs					*D. clouds	Rev. Stephen Whitty.
Oxford, Radcliffe Obs'y			29.70	754.4	38	3.3		E			1		9					Overcast	J. Lucas.
Plymouth			29.60	751.8	48.7	9.3		E			3		10					Raining	John Merrifield.
Roche's Point			29.51	749.5	40	4.4		E			3		8					Cloudy	W. Kennedy.
Saint Ann's Head			29.56	750.8	43	6.1		ESE			4		5					*D. clouds	John C. Walker.
Saint Helier, (Jersey)			29.64	752.8	49.5	9.7		ESE			2		10					Overcast	A. P. Amy.
Sandwick Manse, (Orkneys)			29.60	751.8	28.6	— 1.9		Calm	0	0			5			Blan.	Blan.	*D. clouds	Rev. C. Clouston, LL. D.
Scarborough																			P. Shaw.
Scutari Cemetery, (Turkey)			30.11	764.8	53.0	11.7		S			2		0					Blue sky	Sergt. W. H. Lyne.
Sheffield			29.71	754.6	35.2	1.8		NE			1		2			0	0	Blue sky	W. F. Cooper.
Siloth Rectory			29.70	754.4	32.8	0.4	66	NE			1		0			0	0	Blue sky	Rev. Francis Redford
Stonyhurst, Observatory			29.71	754.6	33.0	0.6		NE			0		0			Blan	dan	Blue sky	Rev. S. J. Perry.
Stornoway, Lewis C., (Hebr.)			29.69	754.1	28	— 2.2		NNE			1		2cs					Snowing	John Smith.
Stratfield Turgiss			29.71	754.6	40.0	4.4		NE			1		10					*D. clouds	Rev. Charles H. Griffith.
Thurso			29.63	752.6	32	0.0		Calm			0		8					Snowing	John Trotter.
Truro, Royal Institution			29.51	749.5	46	7.8		E			7		10					Raining	W. Newcombe.
Valencia, Observatory			29.47	748.5	41.3	5.2		E	12	5.4			8					*D. clouds	The Staff.
SUB-SERIES.																			
Calf of Man, (Isle of Man)					36	2.2		E			3		5			0	0		Henry Mercer.
Cape Good Hope, Obs'y			30.08	764.0	71.3	21.8	52	S	28	12.5		2	6						The Staff, for E. J. Stone.
Hobart Town, (Tasmania)			29.91	759.7	63.0	17.2	94	SE			5		10n			0.40	10.2	Cloudy	Francis Abbott, F.R.A.S.
Leith, Restalrig Park			29.72	754.9	32.2	0.7		NW			2		9k			0.16	4.1	Cloudy	Andrew Gibb.
Mauritius, Observatory			29.97	761.2	84.0	28.9	62	ENE	18.5	8.3		7	4		NE	0.09	2.3	Squally	C. Meldrum.
Melbourne, Observatory			30.04	763.0	56.2	13.4	69	SSE	7	3.1			10			0	0	Fine	R. L. J. Ellery.
Monach L't-house, (Hebrides)			29.71	754.6	35	1.7		NE			3	3	3	E		0	0		J. Youngclause.
North Unst, (Shetland Is.)			29.43	747.5	32	0.0		NW			7		10			In	Blan		Robert Burnet.

NOTE.—Generally, the originals do not give the relative humidity, rain-fall, or distinction between upper and lower clouds. The originals give the wind-direction to 32 points and weather by the Beaufort notation. The originals give the barometer for Aberdeen, Cardington, Galway, Oxford, St. Helier, Sandwick, Scarborough, Stonyhurst, Leith, Monach and North Unst as read off and the cloudiness for Stornoway by the scale 0 to 4. The wind-force is given by the scale 0 to 12 in the official series; 0 to 6 in the sub-series; except in lbs. per square foot for Greenwich and Hobart Town. The rain-fall is measured at Aberdeen at 10 a. m.; Bradford, 9 a. m.; Hobart Town, 7:30 a. m.; Nottingham, 6 p. m.; Mauritius, 9 a. m., local time. The elevation of Dartmoor is 1,400 feet, or 426.7 meters; Davos Platz, 5,105? feet, or 1,556.02 meters; Fort Napier, 2,230 feet, or 670.6 meters. *Detached clouds

By authority of the Minister of Foreign Affairs.

COSTA RICA SERIES.

Furnished by the coöperation of Senor Federico Maison, Director of the Central Office of Statistics and Meteorology.

San José																			

DANISH SERIES.

Furnished by the coöperation of Captain N. Hoffmeyer, Director of the Royal Danish Meteorological Institute at Copenhagen.

Copenhagen			29.39	746.5	32.4	0.2	74	NW			2		5						
Fanöe			29.47	748.0	33.6	0.9	89	W			4		4						
Godthaab, (Greenland)			30.04	763.0	17.2	— 8.2	73	SSE			2		2						
Stykkisholm, (Iceland)			29.99	761.8	17.1	— 8.3	91	NE			6		0						
Thorshavn, (Faröe)			29.63	752.5	23.5	— 4.7	84	N			2		5					Snowing	
Vestervig			29.41	747.0	28.8	— 1.8	92	NNW			2		0						

NOTE.—The originals give the wind-force by the scale 0 to 6; occasionally, weather by Vienna symbols; no distinction between the amount of upper and lower clouds.

FRENCH SERIES.

Furnished by the coöperation of His Excellency, U. J. Le Verrier, Director of the Paris Observatory, and the respective Observers.

STATIONS.	Barometer. Corrected for instru-m'tal error and temperature. Inches.	Millimeters.	Reduced to sea-level. Inches.	Millimeters.	Temperature of the Air. Fahrenheit.	Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Velocity. Miles per hour.	Meters per second.	Force. 0—10.	Clouds. Amount. Up'er 0—10.	Low'r 0—10.	Direction. Upper. From—	Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Millimeters.	Weather.	OBSERVER.
Alençon			29.77	756.1	48.2	9	94	W			2		5s		W	0	0	Cloudy	Normal School.
Amiens			29.71	754.7	48.6	9.2	84	W			2		10			0.126	3.2	Covered	Normal School.
Avignon			29.97	761.3	57.2	14	80	W			1		0			0.142	3.6	Very clear	Normal School.
Bar-sur-Seine			29.86	758.5	50.9	10.5	72	SW			2		5cn		SW	Inap.	Inap.	Cloudy	C. Saillard.
Beaumette, (near Angers)			29.75	755.6	51.4	10.8	80	SW	8.1	3.6					SW	0.012	0.3		Beaumette Observ'tory.
Beauvais			29.77	756.1	49.5	9.7	73	WSW			2		8		W	0	0	Very cloudy	Normal School.
Besançon			29.95	760.7	50.4	10.2	67	S			3		5		SW	0.614	15.6	Cloudy	Normal School.
Bourg en Bresse			29.98	761.6	51.3	10.7	86	SE			2		5ck		N	0.31	8.	Cloudy	Normal School.
Bourges			29.87	758.6	53.4	11.9	70	SSW			2		2		SW	0	0	Slightly cl'dy	Normal School.
Brest			29.51	749.6	47.7	8.7	94	S			4		10		S	0.317	5.50	Raining	Naval Observatory.
Carcassonne			29.99	761.7	54.5	12.5	66	E			1		2		W	0	0	Slightly cl'dy	Normal School.
Caen																			Normal School.
Chartres			29.59	751.5	55.6	13.1	78	SSW			4		6		N	0	0		Normal School.
Châlons-sur-Marne			29.83	757.6	51.8	11.0	75	SW			2		10n		W	0	0	Covered	Normal School.
Clermont			29.90	759.5	53.2	11.8	63	SW			3		8			0.118	3.0	Very cloudy	Puy de Dome Obs'y.
Commercy			29.88	758.9	46.9	8.3	82	SW			8		5kn		SW	0	0	Cloudy	Normal School.
Commune de Gréasque*			29.97	761.3	59.5	15.3	53	NW			1		2		NW	0	0		M. Kina.
Grenoble			29.96	761.0	51.1	10.6	83	ENE			4		2ks		NE	0.187	4.75	Slightly cl'dy	Normal School.
La Roche-sur-Yon			29.79	756.6	52.5	11.4	78	SE			2		10			0.020	0.5	Covered	Normal School.
Le Mans			29.78	756.4	50.4	10.2	82	SW			3		8		SW	0.04	1.	Very cloudy	Normal School.
Lons-Le-Saulnier			29.92	759.9	50.9	10.5	75	SW			2		5		W	0.661	16.80	Cloudy	Normal School.
Lorient			29.66	753.3	51.8	11.0	75	S			4		10			0.433	11.0	Raining	Naval Observatory.
Mâcon			30.06	763.5	49.8	9.9	95	S			8		10			0.047	1.2	Covered	Normal School.
Metz			29.87	758.8	46.9	8.3	92	SW			4		9		SW	0.161	4.1		M. Schuster.
Mirecourt			29.84	757.8	46.8	8.2	86	SW			4		2		W	0	0	Slightly cl'dy	Normal School.
Nismes			29.91	759.7	60.4	15.8	58	NW			1		0			0.020	0.5	Clear	Normal School.
Orleans			29.52	749.9	50.7	10.4	77	SSW			2		8		WSW	0	0	Very cloudy	Normal School.
Paris, Observatory			29.79	756.6	49.5	9.7	78	SE			2	8c		WSW		0	0	Solar halo	National Observatory.
Parthenay																			Normal School.
Privas			29.91	759.8	55.4	13		NW			2		2		NW	0	0	Slightly cl'dy	Normal School.
Rochefort, Observatory			29.84	757.8	54.7	12.6	72	S			3		10		N	0	0	Covered	Naval Observatory.
Rouen			29.74	755.3	51.1	10.4	67	SW			3		2		SW	0	0	Slightly cl'dy	Normal School.
Saint Lo																			Normal School.
Tarbes	28.63	727.1	29.68	753.9	60.8	16	81	WSW			2		0			0	0	Clear	Normal School.
Villefranche			29.93	760.2	53.6	12	71	S			3		5			0.047	1.2	Cloudy	Normal School.
SUB-SERIES.																			
Fort de France, Martinique			29.91	759.7	77.0	25													L'Abbé Marchési.
Marseilles			29.95	760.6	60.6	15.9	61	WSW			1		0			0	0		Marseilles Observatory.
Mont-Louis	24.78	629.4	30.10	764.4	39.2	4.0	54	SW	26.1	11.67			4		S\	0.091	2.3		—. Falguère.
Montsouris, Paris			29.78	756.3	49.1	9.5		SW			3		9		WSW	0	0		Montsouris Observatory
Perpignan			29.96	761.0	58.5	14.7	60	SE	7.4	3.33			3		S	0	0		Dr. Fines.
Pic du Midi, (Summit,) H. P.																			M. Baylac.
Pic du Midi, (Plantade,) H. P.	22.35	567.7			32.4	0.2		NNW			3		2			0.079	2.0	Clear	General de Nansouty.
Saint Maur, (near Paris)			29.79	756.6	50.4	10.2	80	SW			1		2			0	0		E. Renou.
Toulouse			29.96	761.0	54.1	12.3	60	SSE			2		4			0.091	2.3		Toulouse Observatory.
Tours			29.77	756.2	52.9	11.6	75	SW			2		7		WSW	0	0		C. Marquet.
Versailles, (near Paris)			29.79	756.7	50.0	10.0	76	WSW			1		7			0	0	Fair	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai)			30.46	773.6	27.7	— 2.4	80	N	1.3	0.6			0			0	0		Marc Dechevrens, S. J.

NOTE.—Generally, the originals give the wind-force by the scale 0 to 7; no distinction between upper and lower clouds, and, in the official series, the amount by the scale 0 to 4; the rain-fall as measured at 7, 8 or 9 a. m., local time; at Clermont, 9 a. m. of the following day; the weather in general terms as published. The elevation of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; Clermont, 388 meters, or 1,272.9 feet; Commune de Gréasque, 322 meters, or 1,056.4 feet; Pic du Midi, (Summit,) 2,877 meters, or 9,439.1 feet; Pic du Midi, (Plantade,) 2,366 meters, or 7,762.6 feet; Tarbes, 308 meters, or 1.010 feet. In correcting the Mont-Louis barometric observations for altitude, the constant 135. millimeters has been added. * Bouches-du-Rhône

GERMAN SERIES.

Furnished by the coöperation of Professor Dr. G. Neumayer, Director of the German Naval Observatory, Hamburg.

STATIONS.	Corrected Inches.	Millimeters.	Reduced Inches.	Millimeters.	Fahrenheit.	Centigrade.	Per cent.	Wind From—	Miles per hour.	Meters per second.	Force 0—10.	Up'er 0—10.	Low'r 0—10.	Upper From—	Lower From—	Rain Inches.	Millimeters.	Weather.	OBSERVER.
Bamberg			29.60	751.8	48.2	9.0	65	WSW			6		6	W		0	0		Prof. T. Hoh.
Berlin			29.55	750.6	42.8	6.0	81	W			4		10			0.114	2.9		Prof. Arndt.
Breslau			29.60	751.9	49.6	9.8	62	SW			5		5			0	0		Royal University Obs'y.
Carlsruhe			29.78	756.4	51.1	10.6	69	SW			7		9			0.067	1.7		A. Senz.
Cassel			29.65	753.0	40.3	4.6	98	W			7		10	WSW		0.197	5.0		Dr. H. Möhl.
Crefeld			29.67	753.7	40.6	4.8	84	N			3		10			0.24	6.		Director Lose.
Emden			29.72	755.0	36.7	2.6	87	WNW			2		1			0.079	2.0		Prof. Prestel.
Frankfort on the Main			29.73	755.2	49.8	9.9	76	WSW			3		8			0	0		Physical Society.
Friedrichshafen	28.48	723.5	29.93	760.2	48.2	9.0	77	SSW			7		4			0	0	Föhn	M. Wilhelm.
Hamburg			29.56	750.8	38.8	3.8	80	W			3		2k			0.228	5.8	Clear	Captain F. Hegemann.
Kiel			29.51	749.6	37.9	3.3	83	WNW			3		2			0.232	5.9		Prof. G. Karsten.
Königsberg, (Prussia.)			29.29	744.0	40.3	4.6	92	W			7		9			0.016	0.4		Prof. E. Luther.
Köslin			29.42	747.3	32.0	0.0		WNW			3		10			0	0		H. Müller.
Leipsic			29.59	751.5	50.5	10.3	59	SW			7		7	SW		0	0	Storm	Prof. Bruhns.
Memel			29.22	742.2	35.8	2.1	89	WNW			6		10ks			0.106	2.7		Reinbrecht & Skalweit.
Münster			29.65	753.1	43.5	6.4	89	SE			2		10			0	0		Prof. E. Heis.
Neufahrwasser			29.28	743.8	46.4	8.0	63	WNW			5		10			0.004	0.1	Raining	A Lothe.
Posen			29.44	747.8	50.2	10.1	66	W			5		7			0	0		Dr. Magener.
Strassburg, (in Alsace)			29.87	758.6	50.0	10.0	72	SW			2		10	SW		0.004	0.1		Dr. Schur.
Stuttgart			29.80	756.8	49.5	9.7	58	W			3		8			0.028	0.7		Prof. Schoder.
Thorn																			Dr. Hasenbalg.
Treves, (Trier)			29.69	754 2	48.9	9.4	74	W			7		9			0.059	1.5		Prof. Flesch.
Weissenburg, (Bavaria,)	28.28	718.2	29.79	756.6	47.3	8.5	68	WSW			6		10	W		0	0		Dr. von Bebber.
Wustrow, Naval School			29.46	748.2	35.4	1.9	91	WNW			8		8			0.114	2.9		E. F. Schütz.
GERMAN NAVAL SERIES.																			

NOTE.—The elevaon of Friedrichshafen is 413.4 meters, or 1,356 3 feet; Weissenburg, 431 meters, or 1,414.0 ft. In the originals the distinction between the amount of upper and lower clouds is not made. It is not always certain that the remarks in the weather column refer to the moment of observation.

GREEK SERIES.

Furnished by the coöperation of Professor Dr. J. F. Julius Schmidt, Director of the Royal Observatory at Athens.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Athens	.....	.....	30.22	767.6	57.4	14.1	.....	NW	.....	.....	.....	.....	.....	.....	.....	.....	.....	Cloudy	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

Note.—The originals give the barometer corrected, but not reduced to sea-level; occasionally the kind of clouds; the weather as published. They omit the humidity, wind-force, amount of cloudiness and rain-fall.

ITALIAN SERIES.

Furnished by the coöperation of His Excellency the Minister of Agriculture, Industry and Commerce, and the respective Observers.

Udine	.....	.....	29.95	760.7	45.7	7.6	89	N	0.7	0.3	.....	.....	10	.....	.....	0	0	.....	Prof. Giovanni Clodig.
Stelvio	21.97	558.1	30.07	763.8	25.2	— 3.8	.....	W	.....	.....	6	.....	8	N	.....	0.01	0.3	Light rain	Sig. Ernesta Manfredi.
Valdobbia	22.04	559.7	30.08	764.1	25.5	— 3.6	70	WSW	.....	.....	6	.....	3	W	.....	0	0	.....	Ab. Dom. Mongini.
Padua	.....	.....	29.95	760.8	46.6	8.1	89	N	5.6	2.5	.....	.....	10	NE	.....	0	0	.....	Prof. Dott. Lorenzoni.
Vicenza	.....	.....	29.97	761.1	45.0	7.2	90	W	0	0	.....	.....	10	.....	.....	0	0	.....	Conte Alm. Da Schio.
Verona	.....	.....	29.97	761.1	43.0	6.1	85	NE	.....	.....	2	.....	10	.....	.....	0.056	1.4	Raining	Dott. B. Bertoncelli.
Bergamo	28.63	727.1	29.99	761.7	39.2	4.0	99	W	.....	.....	1	.....	10	.....	.....	0	0	Foggy	Prof Trionfini Cesare.
Domodossola	.....	.....	29.99	761.7	44.6	7.0	89	Calm	.....	.....	0	.....	6	.....	.....	0	0	.....	Prof. Giuseppe Ulzia.
Milan	.....	.....	30.04	763.1	40.6	4.8	100	ENE	.....	.....	1	.....	10	.....	.....	0.03	1.0	Light rain	Ab. Gio. Capelli.
Pavia	.....	.....	30.01	762.2	39.6	4.2	88	S	.....	.....	1	.....	10	.....	.....	0	0	.....	Prof. Gio. Cantoni.
Moncalieri	.....	.....	30.04	762.9	39.0	3.9	98	NE	0	0	.....	.....	10	.....	.....	0	0	.....	Prof. P. F. Denza.
Mondovi	28.04	712.2	30.02	762.4	41.2	5.1	90	NE	.....	.....	2	.....	9	.....	.....	0.008	0.2	Foggy	Prof. D. C. Bruno.
Porto Maurizio	.....	.....	29.97	761.3	57.4	14.1	84	SSW	.....	.....	2	.....	4	WSW	.....	0	0	.....	Prof. L. Vassallo.
Genoa	.....	.....	29.96	760.9	56.3	13.5	87	SE	0	0	.....	.....	10	SW	.....	0.02	0.7	Light rain	Prof. G. M. Garibaldi.
Piacenza	.....	.....	30.02	762.6	38.8	3.8	98	NW	3.1	1.4	.....	.....	10	.....	.....	0	0	.....	Dott. G. Manzi.
Parma	.....	.....	30.03	762.7	39.0	3.9	95	SW	.....	.....	2	.....	10	.....	.....	0	0	.....	Prof. P. Pigorini.
Florence	.....	.....	29.98	761.5	55.4	13.0	83	NW	.....	.....	2	.....	5	.....	.....	0	0	.....	Cav. F. Meucci.
Leghorn	.....	.....	29.97	761.1	58.6	14.8	76	NE	1.5	0.6	.....	.....	10	S	.....	0	0	.....	Prof. P. Monte.
Siena	28.76	730.5	29.99	761.8	54.0	12.2	85	ESE	0.7	0.3	.....	.....	10	SW	.....	0	0	.....	Prof. L. Toscani.
Urbino	28.46	722.8	30.05	763.3	52.2	11.2	75	NW	.....	.....	2	.....	7	.....	.....	0	0	.....	Prof. C. Serpieri.
Pesaro	.....	.....	29.97	761.3	51.6	10.9	83	S	13.0	5.8	.....	.....	10	S	.....	0	0	.....	Prof. Luigi Guidi.
Ancona	.....	.....	29.90	762.0	52.5	11.4	83	SE	.....	.....	2	.....	10	.....	.....	0	0	.....	Prof. F. De— Boeis.
Grosseto	.....	.....	30.00	762.0	60.4	15.8	79	NE	.....	.....	4	.....	8	SW	.....	0	0	.....	Avv. P. Ponticelli.
Rome	.....	.....	30.04	763.0	54.3	12.4	73	N	4.9	2.2	.....	.....	9	SW	.....	0	0	.....	Prof's. P. Secchi & L. Respighi.
Naples, O. U.	.....	.....	30.06	763.4	63.9	17.7	36	SW	.....	.....	1	.....	7	SW	.....	0	0	.....	Prof. L. Palmieri.
Lecce	.....	.....	30.16	766.1	57.6	14.2	78	S	24.2	10.8	.....	.....	6	.....	.....	0	0	.....	Prof. C. De—Giorgi.
Cosenza	.....	.....	30.13	765.4	53.2	11.8	71	WSW	1.8	0.8	.....	.....	1	.....	.....	0	0	.....	Prof. F. D. Conti.
Cagliari	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Prof. A. Pacinotti.
Milazzo, (Sicily)	.....	.....	30.14	765.5	60.8	16.0	79	Calm	.....	.....	0	0	0	.....	.....	0	0	.....	Prof. F. Cafiero.
Palermo	.....	.....	30.02	762.4	70.2	21.3	46	E	3.1	1.4	.....	.....	9	.....	.....	0	0	.....	Prof. G. Cacciatore.
Caltanissetta	28.13	714.6	30.12	765.0	56.7	13.7	40	NW	.....	.....	1	.....	10	.....	.....	0	0	.....	Prof. A. Pagani.
Siracusa	.....	.....	30.10	764.4	59.0	15.0	58	SW	.....	.....	1	.....	3	W	.....	0	0	.....	Prof. V. Giuliano.
Sub-Series.																			
Naples, S. R.	.....	.....	30.10	764.6	60.8	16.0	53	SW	0	0	.....	.....	7	SW	.....	0	0	.....	Prof. F. Brioschi
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

Note.—The originals give the wind-force by the scale 0 to 4, or the velocity in kilometers per hour; generally, no distinction between upper and lower clouds; occasionally the weather in general terms. The elevation of Stelvio is 2,543.0 meters, or 8,342.9 feet; Valdobbia, 2,548.0 meters or 8,359.3 feet; Bergamo, 379.6 meters, or 1,245.3 feet; Mondovi, 556 meters, or 1,824.2 feet; Urbino, 461 meters, or 1,479.7 feet; Siena, 348.5 meters, or 1,143.3 feet; Caltanissetta, 570.3 meters, or 1,871.0 feet.

JAPANESE SERIES.

Tokei	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

By authority of the Secretary of Public Works.

MEXICAN SERIES.

Furnished by the coöperation of Senor Mariano Barcena, Director of the Central Meteorological Observatory in the City of Mexico.

Mexico	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Mariano Barcena.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Vicente Reyes.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Miguel Perez.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	(Engineers in charge.)

Note.—The elevation of Mexico is 2,290 meters, or 7,512.9 feet. The rain-fall is measured at 6 a. m., local time.

NETHERLANDS' SERIES.

Furnished by the cooperation of Professor Buys Ballot, Director of the Royal Meteorological Institute of the Netherlands at Utrecht.

Flushing	.....	.....	29.74	755.3	42.4	5.8	.....	NNE	.....	.....	3	.....	.....	.....	.....	0.079	2.0	.....	
Groningen	.....	.....	29.67	751.0	39.4	4.1	.....	WNW	.....	.....	3	.....	.....	.....	.....	0.146	3.7	.....	
Helder	.....	.....	29.66	753.4	41.4	5.2	.....	NW	.....	.....	4	.....	.....	.....	.....	0	0	.....	
Utrecht	.....	.....	29.65	753.2	42.8	6.0	91	W	.....	.....	2	.....	5	.....	.....	0.161	4.1	Cloudy	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

Note.—The originals give the wind-pressure in kilograms per square meter; for Utrecht, they give the weather as published, from which the amount of cloudiness is taken by the scale 0 to 4, without distinguishing between upper and lower clouds. It is assumed that the barometer readings have been reduced to sea-level.

NORWEGIAN SERIES.

Furnished by the coöperation of Professor H. Mohn, Director of the Royal Norwegian Meteorological Institute at Christiania.

Bergen	.....	.....	29.37	746.1	24.8	— 4.0	55	SSE	8.5	3.8	.....	.....	10	.....	.....	0.287	7.3	Snowing	
Bröno	.....	.....	29.37	746.0	10.0	—12.2	55	NE	9	4	.....	.....	2	.....	.....	.....	.....	.....	
Christiania	.....	.....	29.40	746.8	14.0	—10.0	74	E	1.3	0.6	.....	.....	1	.....	.....	0	0	.....	
Tromsö	.....	.....	29.52	749.9	11.8	—11.2	58	E	20	9	.....	.....	0	.....	.....	0	0	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols. The cloudiness and weather at Bergen refer to 2h., p. m., local time, instead of 1h., 4 min.

PORTUGUESE SERIES.

Furnished by the coöperation of J. C. de Brito Capello, Director of the Meteorological Observatory of the Infante Don Luiz at Lisbon.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Angra, (Azores,)	.....	.....	29.41	747.1	53.6	12.0	65	NW	31.1	13.9	.....	.....	5	.....	.....	0.165	4.2	.....	Dr. J. A. Sampaio.
Campo Major	.....	.....	30.01	762.3	55.4	13.0	81	SSW	18.1	8.1	.....	10	.....	SSW	.....	0	0	.....	Dr. A. M. R. dos Santos.
Funchal, (Madeira,)	.....	.....	30.02	762.5	63.0	17.2	83	WNW	5.6	2.5	.....	8	.....	.....	.....	0.039	1.0	Raining.....	Capt. D. A. de Cunha.
Lisbon	.....	.....	29.93	760.3	59.4	15.2	84	SSW	27.3	12.2	.....	10	.....	.....	.....	0.146	3.7	.....	The Observatory.
Ponta Delgada, (Azores)	.....	.....	29.50	749.4	56.8	13.8	71	W	22.4	10.0	.....	.....	10	.....	.....	0.228	5.8	Raining.....	
.....																			

Note.—The originals give the wind-velocity in kilometers per hour; occasionally, the weather by the Vienna symbols; the amount of cloudiness without distinguishing between upper and lower clouds; the barometer corrected but not reduced to sea-level. The rain-fall at Libson is measured at noon, instead of 0 h. 6 m., p. m.

RUSSIAN SERIES.

Furnished by the cooperation of Professor H. Wild, Director of the Imperial Central Physical Observatory of Russia, at St. Petersburg.

Warsaw	.....	.....	29.48	748.9	46.4	8.0	65	SSW	25	11	.....	.....	6	.....	.....	.....	.....	.....	Astronomical Obs.
Wilna	.....	.....									.....	.....		.....	.....	.....	.....	.....	Astronomical Obs.
Dorpat	.....	.....	28.87	733.3	34.5	1.4	93	W	16	7	.....	10	.....	.....	.....	.....	.....	.....	Physical Cabinet.
St. Petersburg	.....	.....	28.75	730.3	18.3	— 7.6	85	NNE	11	5	.....	10	.....	.....	.....	.....	.....	Snowing.....	Central Physical Obs.
Kuopio	.....	.....	29.01	736.8	— 0.8	—18.2	100	NE	22	10	.....	10	.....	.....	.....	.....	.....	Snowing.....	Ch. Forsten.
Kieff	.....	.....	29.60	751.7	36.0	2.2	87	WNW	7	3	.....	10	.....	.....	.....	.....	.....	Solar corona	Physical Cabinet.
Nikolaiev	.....	.....	29.80	756.9	42.4	5.8	82	S	9	4	.....	4	.....	.....	.....	.....	.....	.....	Kurdakof.
Kertch	.....	.....	29.98	761.5	51.6	10.9	83	SSW	13	6	.....	6	.....	.....	.....	.....	.....	.....	Lagorio.
Moscow	.....	.....	29.27	743.4	30.9	2.7	91	S	9	4	.....	7	.....	.....	.....	.....	.....	.....	Meteorological Obs.
Lugan	.....	.....	29.73	755.1	40.3	4.6	92	SW	27	12	.....	9	.....	.....	.....	.....	.....	.....	Meteorological Obs.
Archangel	.....	.....	29.22	742.2	—18.8	—28.2	84	E	22	10	.....	10	.....	.....	.....	.....	.....	.....	Ogorodnikof.
Tiflis	28.85	732.9	30.31	769.9	46.4	8.0	62	NNW	13	6	.....	0	.....	.....	.....	.....	.....	.....	Physical Observatory.
Astrakhan	.....	.....	30.13	765.4	39.9	4.4	89	SSW	7	3	.....	9	.....	.....	.....	.....	.....	.....	Sebastianof.
Kasun	.....	.....	29.29	743.9	27.5	— 2.5	96	SW	22	10	.....	10	.....	.....	.....	.....	.....	.....	Physical Cabinet.
Orenburg	.....	.....	30.72	780.3	— 7.4	—21.9	62	E	13	6	.....	3	.....	.....	.....	.....	.....	.....	Tschernischef.
Ekaterinburg	28.46	722.8	29.44	747.7	24.3	— 4.3	86	SW	9	4	.....	10	.....	.....	.....	.....	.....	.....	Meteorogical Obs.
Nukuss	.....	.....	30.43	773.0	35.2	1.8	71	E	4	2	.....	1	.....	.....	.....	.....	.....	.....	
Kasaly																			Bobrof.
Tashkend																			Michelson.
Barnaul	.....	.....	30.46	773.7	— 0.2	—17.9	84	S	4	2	.....	10	.....	.....	.....	.....	.....	.....	Meteorological Obs.
Yeniseisk	.....	.....	30.11	764.7	—22.0	—30.0	79	Calm	0	0	.....	0	.....	.....	.....	.....	.....	.....	Marks.
Irkutsk																			Usolzef.
Peking, (China)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Physical Observatory.
Nertchinsk	.....	.....	30.53	775.5	11.1	—11.6	64	Calm	0	0	.....	0	.....	.....	.....	.....	.....	.....	Meteorological Obs.
Vladivostock																			
Nikolaievsk, on the Amoor																			
.....	.....	.....	.....	.....	29.8	— 1.2	.....	E	9	4	.....	10	.....	.....	.....	.....	.....	Snowing.....	
.....																			

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols; they omit the rain-fall. The elevation of Tiflis is 409 meters, or 1,341.8 feet; Ekaterinburg, 306.4? m., or 1,005.2? ft.; Tashkend, 494.2? m., or 1,621.3? ft.; Irkutsk, 392 m., or 1,286 ft.; Nertchinsk, 592.0? m., or 1,942.2? ft.; Oorga, 1,281.0? m., or 4,202.6? ft.

SPANISH SERIES.

Furnished by the coöperation of Antonio Aguilar, Director of the Royal Observatory at Madrid, and of Don Cecilio Pujazon, Captain R. N. Director of the Naval Observatory at San Fernando.

Madrid	.....	.....	30.10	764.5	49.3	9.6	80	S	20.9	9.34	.....	0	9	.....	.....	0.051	1.3	Almost cov'd	Royal Observatory.
San Fernando	.....	.....	30.17	766.2	60.3	15.7	84	S	7.2	3.2	.....	1	3	E	E	0.154	3.9	.....	Naval Observatory.
.....																			
.....																			
.....																			
.....																			

Note.—The originals give the weather in general terms, as published; rain-fall for San Fernando from preceding to following midnight; wind-velocity for Madrid in kilometers per hour.

SWEDISH SERIES.

Furnished by the coöperation of Professor R. Rubenson, Director of the Royal Swedish Meteorological Institute, at Stockholm, and of Dr. H. H. Hildebrandsson, Chief of the Meteorological Division of the Upsala Observatory.

Haparanda	.....	.....	29.31	744.5	— 3.6	—19.8	87	NE	.....	.....	4	.....	10	.....	.....	0.197	5.0	.....	
Umea	.....	.....	29.32	744.7	— 0.8	—18.2	89	N	.....	.....	6	.....	8	.....	.....	0.024	0.6	.....	
Hernosand	.....	.....	29.33	745.0	— 0.9	—18.3	89	N	.....	.....	2	.....	1	.....	.....	0.051	1.3	.....	
Stockholm	.....	.....	29.22	742.2	10.4	—12.0	93	NNE	.....	.....	4	.....	10	.....	.....	0.213	5.4	.....	
Wisby	.....	.....	29.21	741.8	24.4	— 4.2	91	N	.....	.....	7	.....	10	.....	.....	0.429	10.9	Snowing.....	
Sub-Series.																			
Upsala	.....	.....	29.29	743.9	7.2	—13.8	100	NNW	19.9	8.9	.....	.....	10	.....	.....	0.010	0.26	.....	Dr. Hildebrandsson.
.....																			

Note.—The originals give the wind-force by the scale 0 to 6, and Upsala also velocity in meters per second; occasionally, the weather by the Vienna symbols, or in general terms; no distinction between the amount of upper and lower clouds. The rain-fall is measured at 8 a. m., local time.

SWISS SERIES.

Furnished by the coöperation of Professor R. Wolf, Director of the Observatory at Zurich, and of Professor E. Plantamour, Director of the Observatory at Geneva.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Geneva	28.52	724.3	29.94	760.5	54.3	12.4	60	WSW	.....	.....	3	.....	8	.....	.....	0.583	14.8	Clouds	The Observatory.
Zurich	28.30	718.8	29.96	760.9	48.0	8.9	71	W	.....	.....	2	.....	2	.....	.....	0.433	11.0	Clear	The Observatory.

Note.—For Geneva the corresponding departures from the normal values are: Barometer, —3.4 mm; Thermometer, +10.9 cent.; Relative Humidity, —20 per cent.

Note.—The rain-fall is measured at Zurich at 7 a. m., on the following day. The originals give the barometer corrected but not reduced to sea-level; the wind-force by the scale 0 to 4 for Zurich; the amount of cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The elevation of Geneva is 408 meters, or 1,339 feet, and that of Zurich 470 meters, or 1,542 feet.

TURKISH SERIES.

Furnished by the coöperation of A. Coumbary, Effendi, Director of the Central Observatory at Constantinople, and of Professor C. V. A. Van Dyck, Superintendent of the Lee Observatory at Beirut.

Constantinople	.....	.....	30.15	765.7	54.0	12.2	73	SSW	8	3.5	.....	.....	0	.....	.....	0	0	.....	
Fao, (Persian Gulf)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Salonica	.....	.....	30.22	767.6	59.4	15.2	.....	SE	.....	.....	1	.....	0	.....	.....	.....	.....	.....	
Valona	.....	.....	30.15	765.7	57.2	14.0	.....	S	.....	.....	1	.....	0	.....	.....	.....	.....	.....	
Varna	.....	.....	29.84	758.0	60.8	16.0	.....	E	.....	.....	1	.....	0	.....	.....	.....	.....	.....	
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y	.....	.....	30.25	768.3	65.8	18.8	56	W	.....	.....	1	.....	3k	.....	SW	0	0	*D. clouds	Prof. C. V. A. Van Dyck

Note.—The originals give the wind-force by the scale 0 to 7, (except Beirut, by the scale 0 to 12, and Constantinople velocity in meters per second;) the weather in general terms as published; no distinction between upper and lower clouds, and, except Constantinople and Beirut, the amount by the scale 0 to 4. It is assumed that the barometer is reduced to sea-level. * Detached clouds.

CANADIAN SERIES.

Furnished by the cooperation of Professor G. T. Kingston, Director of the Magnetic Observatory at Toronto, and Superintendent of the Meteorological Office of the Dominion of Canada, and the respective Observers. Those marked with a star (*) are also telegraphed daily to the office of the Chief Signal Officer, U. S. Army.

Bathurst, N. B	.....	.....	29.48	748.8	13.6	—10.2	91	Calm	0	0	.....	.....	10	.....	.....	0	0	.....	Hon. J. Ferguson.
Brockville, Ontario	.....	.....	29.79	756.7	6	—14.4	.....	N	5	2.2	.....	.....	10s	.....	NW	0.10	2.5	Light snow	W. R. Bigg.
*Chatham, N. B	.....	.....	29.47	748.5	8	—13.3	100	Calm	0	0	.....	.....	Haze	.....	.....	0	0	Cloudy	G. A. Blair.
Charlottetown, P. E. Island	.....	.....	29.50	749.3	15	— 9.4	82	NE	5	2.2	.....	.....	10s	.....	.....	0	0	Cloudy	H. J. Cundall, C. E.
Cornwall, Ontario	.....	.....	29.71	754.6	11.9	—11.2	90	W	.....	.....	2	.....	10s	.....	.....	0	0	Dull	James Smith, M. A.
Dalhousie, N. B	.....	.....	29.49	749.0	.....	.....	.....	W	.....	.....	1	.....	.....	.....	.....	0	0	Overcast	H. A. Johnson.
Esquimault, B. C	.....	.....	30.32	770.1	42.1	5.6	96	N	.....	.....	.....	.....	10s	.....	.....	0.19	4.8	Cloudy	W. H. Bevis.
Fredericton, N. B	.....	.....	29.51	749.5	10.4	—12.0	96	N	6	2.7	.....	.....	10n	.....	.....	0.045	1.14	Snowing	Prof. Harrison.
*Fort Garry, Manitoba	.....	.....	30.55	776.0	—18	—27.8	93	SW	5	2.2	.....	Haze	Haze	.....	.....	0.056	1.42	Hazy	James Stewart.
Goderich, Ontario	.....	.....	29.98	761.5	13.7	—10.2	91	Calm	.....	.....	0	.....	10n	.....	.....	0	0	Dull	H. J. Strang, M. A.
Granton, Ontario	28.73	729.7	29.92	760.0	10.6	—11.9	.....	Calm	.....	.....	0	.....	10n	.....	.....	In up	Inap.	Snowing	James Grant.
*Halifax, N. S	.....	.....	29.40	746.7	22	— 5.6	88	NE	10	4.5	.....	.....	8n	.....	.....	0.080	2.03	Light snow	F. Allison, M. A.
Hamilton, Ontario	.....	.....	29.93	760.2	10.5	—11.9	78	W	.....	.....	2	6ck	0	.....	.....	0.10	2.5	Cloudy	G. Dickson.
Heart's Content, N. F	.....	.....	29.62	752.3	26.0	— 3.3	88	W	.....	.....	3	.....	10	.....	.....	0	0	Overcast	E. Weedon.
*Kingston, Ontario	.....	.....	29.87	758.2	9	—12.8	83	Calm	0	0	.....	.....	10s	.....	.....	0.03	0.8	Cloudy	S. Woods, M. A.
*Montreal, Quebec	.....	.....	29.69	754.1	10	—12.2	70	N	12	5.4	.....	.....	10n	.....	.....	0	0	Cloudy	C. H. McLeod, C. E.
*Ottawa, Ontario	.....	.....	29.77	756.1	6	—14.4	83	NW	8	3.6	.....	.....	10cs	.....	W	0	0	Threatening	J. B. Haney.
*Parry Sound, Ontario	.....	.....	29.95	760.7	8	—13.3	78	N	8	3.6	.....	2ck	5ks	NE	NE	0	0	Fair	Rev. R. Mosley.
Port Dover, Ontario	.....	.....	29.89	759.2	12	—11.1	92	N	8	3.6	.....	.....	10n	.....	N	0.11	2.8	Threatening	H. Morgan.
Port Hastings, N. S	.....	.....	29.47	748.5	13.8	—10.1	.....	Calm	0	0	.....	.....	.....	.....	.....	(trap.	Inap.	Fine	Peter Grant.
Port Stanley, Ontario	.....	.....	29.91	759.7	14	—10.0	96	N	4	1.8	.....	.....	10n	.....	W	0.05	1.3	Light snow	M. Payne.
*Quebec, Quebec	.....	.....	29.73	755.1	6	—14.4	76	Calm	0	0	.....	.....	10n	.....	.....	0	0	Cloudy	Capt. Ashe, R. N.
Rockliffe, Ontario	.....	.....	29.91	759.7	7	—13.9	93	W	6	2.7	.....	.....	Haze	.....	.....	0	0	Hazy	
St. John, N. B	.....	.....	29.40	746.7	11	—11.7	90	NE	5	2.2	.....	.....	10n	.....	.....	0.450	11.43	Overcast	G. Murdoch, C. E.
*Saugeen, Ontario	.....	.....	29.93	760.2	12	—11.1	80	Calm	0	0	.....	.....	10s	.....	.....	0.02	0.5	Light snow	K. Stewart.
Stayner, Ontario	.....	.....	29.93	760.2	12	—11.1	79	Calm	0	0	.....	.....	10n	.....	.....	0	0	Threatening	R. J. Cole.
Stratford, Ontario	28.54	724.9	29.93	760.2	10.3	—12.1	94	N	1	0.4	.....	.....	10s	.....	.....	0.12	3.0	Cloudy	C. J. MacGregor, M. A.
*Sydney, C. B	.....	.....	29.58	751.3	16	— 8.9	95	E	1	0.4	.....	10cs	2s	.....	.....	0	0	Cloudy	T. C. Hill.
*Toronto, Ontario	.....	.....	29.91	759.7	7	—13.9	89	N	8	3.6	.....	5cs	0	W	.....	0.08	2.0	Fair	Magnetic Observatory.
Woodstock, Ontario	.....	.....	29.88	758.9	11.6	—11.3	64	N	7	3.1	.....	.....	10s	.....	.....	0.20	5.1	Cloudy	J. Montgomery.
Sub-Series.																			
St. Johns, Newfoundland	.....	.....	29.73	755.1	19.0	— 7.2	100	W	.....	.....	.....	5k	10s	.....	.....	0.32	8.1	Cloudy	John Delany.

Note.—The originals for Brockville, Charlottetown, Port Dover, Port Stanley, St. Johns, N. F., Stayner and those telegraphed, give the cloudiness by the scale 0 to 4. The elevation of Granton is 1,015 feet, or 309.4 m.; Stratford, 1,182 feet, or 360.3 m.

UNITED STATES SERIES.

Furnished by the coöperation of Bvt. Brig. Gen. Albert J. Myer, Chief Signal Officer, U. S. Army.

STATIONS.	Barometer: Corrected for instrum'tal error and temperature. Inches.	Barometer: Corrected for instrum'tal error and temperature. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er. 0—10.	Clouds. Amount. Low'r. 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Albany, N. Y.	.....	.....	29.57	751.1	11	—11.7	100	N	16	7.2	.....	.....	10n	.....	NW	0.19	4.8	Light snow..	
Alpena, Mich.	.....	.....	28.95	760.7	19	— 7.2	100	N	8	3.6	.....	.....	10n	.....	.....	0.48	10.9	Light snow..	
Atlantic City, N. J.	.....	.....	29.62	752.3	21	— 6.1	85	NW	20	8.9	.....	.....	10s	.....	.....	0.06	1.5	Cloudy.....	
Augusta, Ga.	.....	.....	30.10	764.5	26	— 3.3	81	NW	5	2.2	.....	0	0	.....	.....	1.34	34.0	Clear	
Baltimore, Md.	.....	.....	29.76	755.9	20	— 6.7	85	W	10	4.5	.....	Haze	2s, fg	.....	.....	0.36	9.1	Clearing.....	
Barnegat, N. J.	.....	.....	29.57	751.1	22	— 5.6	93	NW	26	11.6	.....	8k	2s	W	NW	0.80	20.3	Cloudy	
Bismarck, Dakota	28.54	724.9	30.51	774.9	—22	—30.0	69	Calm	0	0	.....	.....	10s	.....	.....	0.05	1.3	Threatening	
Boston, Mass.	.....	.....	29.35	745.5	15	— 9.4	100	NW	20	8.9	.....	.....	10n	.....	.....	0.67	17.0	Light snow..	
Breckenridge, Minn.	.....	.....	30.57	776.5	—12	—24.4	75	NW	8	3.6	.....	.....	10s	.....	NW	0	0	Cloudy.....	
Buffalo, N. Y.	.....	.....	29.82	757.4	16.5	— 8.6	75	N	6	2.7	.....	5k	Haze	N	.....	0.04	1.0	Fair	
Burlington, Vt.	.....	.....	29.66	753.4	8	—13.3	78	N	8	3.6	.....	.....	10s	.....	.....	0	0	Cloudy.....	
Cairo, Ill.	.....	.....	30.34	770.6	14	—10.0	82	W	5	2.2	.....	.....	10s	.....	.....	0	0	Cloudy.....	
Cape Hatteras, N. C.	.....	.....	29.82	757.4	29	— 1.7	89	NW	20	8.9	.....	0	2ks	.....	NW	2.01	51.1	Fair	
Cape Henry, Va.	.....	.....	29.84	757.9	25	— 3.9	75	NW	16	7.2	.....	0	0	.....	.....	0.44	11.2	Clear	
Cape Lookout, N. C.	.....	.....	29.95	760.7	30	— 1.1	79	NW	32	14.3	.....	0	0	.....	.....	1.19	30.2	Clear	
Cape May, N. J.	.....	.....	29.68	753.9	21	— 6.1	85	NW	40	17.9	.....	0	0	.....	.....	0.54	13.7	Clear	
Charleston, S. C.	.....	.....	30.11	764.8	31	— 0.6	60	SW	12	5.4	.....	0	0	.....	.....	1.86	47.2	Clear	
Cheyenne, Wyoming	24.14	613.1	30.08	764.0	20	— 6.7	85	NW	12	5.4	.....	2ck	0	NW	.....	0	0	Fair	
Chicago, Ill.	.....	.....	30.18	765.3	4	—15.6	74	W	7	3.1	.....	0	0	.....	.....	0	0	Clear	
Cincinnati, Ohio	.....	.....	30.12	765.0	5	—13.3	78	W	6	2.7	.....	.....	10ks	.....	W	Inap.	Inap.	Cloudy.....	
Cleveland, Ohio	.....	.....	29.98	761.5	9.5	—12.5	89	SW	12	5.4	.....	.....	10n	.....	.....	0.02	0.5	Light snow..	
Corsicana, Tex.	.....	.....	30.21	767.3	25	— 3.9	81	S	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Davenport, Iowa	.....	.....	30.36	771.1	— 5	—20.6	82	W	8	3.6	.....	0	0	.....	.....	0	0	Clear	
Denison, Tex.	.....	.....	30.29	769.4	22	— 5.6	72	NE	2	0.9	.....	0	0	.....	.....	0	0	Clear	
Denver, Col.	24.92	633.0	30.14	765.5	25	— 3.9	87	S	4	1.8	.....	.....	10s	.....	.....	0.10	2.5	Cloudy.....	
Detroit, Mich.	.....	.....	29.94	760.5	10	—12.2	79	W	3	1.3	.....	.....	10s	.....	.....	0.04	1.0	Cloudy.....	
Dodge City, Kan.	27.71	703.8	30.24	768.1	12	—11.1	80	NE	14	6.3	.....	.....	10s	.....	NE	0	0	Cloudy.....	
Dubuque, Iowa	.....	.....	30.33	770.4	— 3	—19.4	66	Calm	0	0	.....	0	Haz.	.....	.....	0	0	Clear	
Duluth, Minn.	.....	.....	30.41	772.4	— 2	—18.9	84	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Eastport, Me.	.....	.....	29.36	745.7	14	—10.0	100	N	17	7.6	.....	.....	10n	.....	.....	0.18	4.6	Light snow..	
Erie, Pa.	.....	.....	29.88	758.9	15	— 9.4	100	W	12	5.4	.....	.....	10n	.....	.....	0.25	6.3	Light snow..	
Escanaba, Mich.	.....	.....	30.08	764.0	12	—11.7	80	NW	5	2.2	.....	.....	10s	.....	NW	0.03	0.8	Cloudy.....	
Fort Gibson, Indian Ter.	.....	.....	30.27	768.8	18	— 7.8	68	N	7	3.1	.....	0c	0	W	.....	0	0	Fair	
Ft. St. Michael, Alaska	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Fort Sill, Indian Ter.	29.12	739.6	30.34	770.6	18	— 7.8	39	NE	3	1.3	.....	0	0	.....	.....	0	0	Clear	
Fort Sully, Dakota	28.70	729.0	30.62	777.7	— 2	—18.9	84	E	8	3.6	.....	.....	10s	.....	E	0.15	3.8	Cloudy.....	
Florence, Arizona	28.60	726.4	30.16	766.1	49	9.4	.....	E	.....	.....	.....	0	0	.....	.....	0	0	Clear	
Galveston, Tex.	.....	.....	30.30	769.6	40	4.4	82	SW	3	1.3	.....	0	0	.....	.....	0	0	Clear	
Grand Haven, Mich.	.....	.....	29.97	761.2	22	— 5.6	85	N	6	2.7	.....	.....	10n	.....	N	0.12	3.0	Light snow..	
Indianapolis, Ind.	.....	.....	30.21	767.3	0	—17.8	85	SW	2	0.	.....	0	Sm'k	.....	.....	Inap.	Inap.	Clear	
Indianola, Tex.	.....	.....	30.28	769.1	40	4.4	83	SW	2	0..	.....	0	0	.....	.....	0	0	Clear	
Jacksonville, Fla.	.....	.....	30.20	767.1	34	1.1	69	W	6	2.7	.....	0	0	.....	.....	0.11	2.8	Clear	
Keokuk, Iowa	.....	.....	30.34	770.6	— 2	—18.9	84	NW	5	2..	.....	0	0	.....	.....	0	0	Clear.....	
Key West, Fla.	.....	.....	30.23	767.8	56	13.3	87	NW	20	8.9	.....	0	8ks	.....	.....	0.25	6.3	Cloudy.....	
Kittyhawk, N. C.	.....	.....	29.88	758.9	26	— 3.3	70	W	16	7.2	.....	2ck	0	W	.....	1.47	37.3	Fair	
Knoxville, Tenn.	.....	.....	30.26	768.6	9	—12.8	78	Calm	0	0	.....	0	0	.....	.....	0.76	19.1	Clear	
La Crosse, Wis.	.....	.....	30.34	770 6	— 3	—19.4	66	W	1	0.4	.....	Haz.	Haz.	.....	.....	0	0	Hazy	
Leavenworth, Kan.	.....	.....	30.46	773.7	5	—15.0	74	NW	6	2.7	.....	0	0	.....	.....	0.04	1.0	Clear	
Louisville, Ky.	.....	.....	30.25	768.3	6	—15.0	60	SW	2	0.9	.....	2ck	Haz.	.....	.....	0	0	Clear.....	
Lynchburg, Va.	.....	.....	29.93	760.2	18	— 7.8	58	SW	2	0.9	.....	0	0	.....	.....	1.31	33.3	Clear.....	
Malone, N. Y.	.....	.....	29.67	753.6	10	—12.2	90	Calm	0	0	.....	.....	10n	.....	.....	Inap.	Inap.	Light snow..	
Marquette, Mich.	.....	.....	30.11	764.8	18	— 7.8	68	NW	16	7.2	.....	.....	10s	.....	.....	0.17	4.3	Cloudy.....	
Memphis, Tenn.	.....	.....	30.32	770.1	21	— 6.1	72	NE	6	2.7	.....	.....	10s	.....	W	0	0	Cloudy.....	
Milwaukee, Wis.	.....	.....	30.13	765.3	5	—15.0	75	NW	15	6.7	.....	0	0	.....	.....	Inap.	Inap.	Clear	
Mobile, Ala.	.....	.....	30.34	770.6	28	— 2.2	88	Calm	0	0	.....	0	Fog	.....	.....	0.01	0.3	Clear.....	
Montgomery, Ala.	.....	.....	30.31	769.9	27.5	— 2.5	94	W	5	2.2	.....	0	Sm'k	.....	.....	0.13	3.3	Clear.....	
Morgantown, W. Va.	28.84	732.5	29.97	761.2	16	— 8.9	83	W	23	10.3	.....	.....	10s	.....	W	0.20	5.8	Cloudy.....	
Mt. Washington, N. H.	22.00	588.2	29.32	744.7	5	—15.0	100	N	17	7.6	.....	.....	Fog	.....	.....	0.08	2.0	Foggy	
Nashville, Tenn.	.....	.....	30.32	770.1	11	—11.7	69	Calm	0	0	.....	.....	10s	.....	.....	0.02	0.5	Cloudy.....	
New Haven, Conn.	.....	.....	29.53	750.0	21	— 6.1	72	N	12	5.4	.....	0ck	0s	NW	N	0.20	6.3	Cloudy.....	
New London, Conn.	.....	.....	29.41	747.0	21	— 6.1	85	N	13	5.8	.....	.....	10n	.....	N	0.48	12.2	Light snow..	
New Orleans, La.	.....	.....	30.32	770.1	35.5	1.9	75	NW	1	0.4	.....	0	Sm'k	.....	W	0.02	0.5	Smoky.....	
Newport, R. I.	.....	.....	29.33	745.0	20	— 6.7	100	NW	24	10.7	.....	.....	10n	.....	NW	0.35	8.9	Light snow..	
New York, N. Y.	.....	.....	29.57	751.1	20	— 6.7	85	NW	9	4.0	.....	.....	10ks	.....	W	1.12	28.4	Cloudy.....	
Norfolk, Va.	.....	.....	29.87	758.7	24	— 4.4	87	W	7	3.1	.....	0	0	.....	.....	0.41	10.4	Clear.....	
North Platte, Neb.	27.35	694.7	30.19	766.8	11	—11.7	79	NE	5	2.2	.....	.....	10s	.....	.....	0	0	Cloudy.....	
Omaha, Neb.	29.20	743.2	30.50	774.7	— 2	—18.9	67	NW	10	4.5	.....	0	0	.....	.....	0.01	0.3	Clear	
Oswego, N. Y.	.....	.....	29.78	756.4	14.5	— 9.7	81	N	18	8.0	.....	.....	10n	.....	.....	Inap.	Inap.	Heavy snow	
Pembina, Dakota	.....	.....	30.30	771.1	—20.5	— 6.4	93	SE	1	0.4	.....	.....	10s	.....	.....	0	0	Cloudy.....	
Philadelphia, Pa.	.....	.....	29.65	753.1	20	— 6.7	85	NW	28	12.5	.....	2cs	Haz.	NW	.....	0.26	24.1	Fair	
Pike's Peak, Col.	17.62	447.5	29.83	757.7	— 3.5	—19.7	83	N	12	5.4	.....	0cs	0s	N	.....	0	0	Cloudy	
Pittsburgh, Pa.	.....	.....	29.91	759.7	15	— 9.4	91	W	12	5.4	.....	.....	10n	.....	W	0.23	5.8	Light snow..	
Port Huron, Mich.	.....	.....	29.90	759.4	14	—10.0	91	NW	6	2.7	.....	.....	10n	.....	.....	0.02	0.5	Light snow..	
Portland, Me.	.....	.....	29.39	746.5	14	—10.0	83	N	24	10.7	.....	.....	10n	.....	.....	0.02	0.5	Light snow..	
Portland, Oregon	.....	.....	30.26	768.6	42	5.6	91	N	4	1.8	.....	.....	10s	.....	.....	0	0	Cloudy.....	
Punta Rassa, Fla.	.....	.....	30.26	768.6	47.5	8.6	55	N	24	10.7	.....	0	0	.....	.....	0.01	15.5	Clear	
Rochester, N. Y.	.....	.....	29.78	756.4	16	— 8.9	91	N	8	3.6	.....	.....	10n	.....	.....	0.20	5.1	Heavy snow	
Salt Lake City, Utah.	25.90	657.8	30.29	767.8	18	— 7.8	84	SE	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Sandy Hook, N. J.	.....	.....	29.52	749.8	23	— 5.0	86	NW	30	13.4	.....	.....	10n	.....	NW	1.18	30.0	Light snow..	
San Diego, Cal.	.....	.....	30.12	765.0	50	10.0	42	Calm	0	0	.....	0	0	.....	.....	0	0	Clear.....	
San Francisco, Cal.	.....	.....	30.17	766.3	48	8.9	77	N	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Santa Fé, N. M.	23.31	592.1	29.85	758.2	15	— 9.4	50	E	2	0.9	.....	0	0	.....	.....	0	0	Clear	
Savannah, Ga.	.....	.....	30.15	765.8	30	— 1.1	78	W	10	4.5	.....	0	0	.....	.....	0.02	15.7	Clear	
Shreveport, La.	.....	.....	30.32	770.1	20	— 6.7	85	Calm	0	0	.....	.....	Fog	.....	.....	0	0	Foggy	
Smithville, N. C.	.....	.....	30.02	762.5	26	— 3.3	88	NW	6	2.7	.....	0	0	.....	.....	0.68	17.3	Clear	
Springfield, Mass.	.....	.....	29.44	747.8	20	— 6.7	77	N	8	3.6	.....	.....	10n	.....	.....	0.09	2.3	Light snow..	
St. Louis, Mo.	.....	.....	30.38	771.6	9	—12.8	78	NW	10	7.2	.....	.....	10s	.....	.....	0	0	Cloudy.....	
St. Marks, Fla.	.....	.....	30.29	769.4	28	— 2.2	88	NW	5	2.2	.....	0	0	.....	.....	Inap.	Inap	Clear.....	
St. Paul, Minn.	.....	.....	30.41	772.4	—13	—25.0	73	W	4	1.8	.....	0	0	.....	.....	0	0	Clear.....	
St. Paul's Island, Alaska	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Thatcher's Island, Mass.	.....	.....	29.31	744.5	22	— 5.6	85	N	44	19.7	.....	.....	.....	.....	.....	0.02	0.5	Heavy snow	
Toledo, Ohio	.....	.....	29.96	761.0	15	— 9.4	82	SW	8	3.6	.....	.....	10n	.....	SW	0.15	3.8	Heavy snow	
Tucson, Arizona	27.09	703.3	30.24	768.1	24	— 4.4	.....	S	.....	.....	.....	2c	0	NW	.....	0	0	Clear.....	
Tybee Island, Ga.	.....	.....	30.12	765.0	28	— 2.2	67	W	12	5.4	.....	1k	0	NW	.....	0.75	19.1	Clear.....	
Vicksburg, Miss.	.....	.....	30.36	771.1	26.5	— 3.1	100	Calm	0	0	.....	.....	Fog	.....	.....	Inap.	Inap.	Foggy	
Virginia City, M. T.	24.47	621.5	29.95	760.7	22	— 5.6	78	Calm	0	0	.....	8c	0	W	.....	0	0	Cloudy.....	
Washington, D. C.	.....	.....	29.81	757.2	19	— 7.2	67	NW	16	7.2	.....	0	0	.....	.....	0.39	9.9	Clear.....	
Wilmington, N. C.	.....	.....	30.01	762.2	25	— 3.9	88	W	8	3.6	.....	0	0	.....	.....	0.86	21.8	Clear	

UNITED STATES SERIES.—Continued.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Wood's Holl, Mass.	.....	.....	29.23	742.4	22	— 5.6	85	N	32	14.3	.....	.....	10n	.....	.....	0.89	22.6	Light snow.	
Yankton, Dakota	29.18	741.2	30.73	780.5	—17	—27.2	68	W	8	3.6	.....	0	0	.....	.....	0	0	Clear	
Yuma, Arizona	.....	.....	30.17	766.3	51	10.6	.....	N	.....	.....	.....	0	0	.....	.....	0	0	Clear	
Sub-Series.																			
Kingston, Jamaica, W. I.	.....	.....	30.24	768.1	73	22.8	76	Calm	0	0	.....	8c	2s	.....	.....	0	0	.....	James Gall.
Navassa, W. I.	.....	.....	.....	.....	78	25.6	.....	NE	.....	.....	2	.....	.....	.....	.....	0	0	Cloudy	F. M. Everett.
Clifton, Ja., W. I.	27.24	691.9	30.04	763.0	65	18.3	83	E	1.0	0.4	.....	2c	2k	E	.....	0	0	Fine	C. Partridge.
Paramaribo, D. Guiana, S.A.	.....	.....	30.02	762.5	81	27.2	87	E	.....	.....	2	4c	5k	E	.....	0	0	Fair	C. J. Hering.
Batavia, Dutch Guiana, S.A.	30.00	762.0	.....	.....	78.8	26.0	.....	E	.....	.....	.....	.....	.....	.....	.....	0	0	Cloudy	Dr. H. Groot.
Medellin, Colombia, S. A.	25.28	642.1	.....	.....	64.5	18.1	92	Calm	.....	.....	0	.....	10n	.....	.....	0.02	0.5	Light rain	Thomas Herran.
York Factory, B. A.	.....	.....	30.38	771.6	—33.5	—36.4	.....	W	8	3.6	.....	0	0	.....	.....	0	0	Fair	J. Fortescue, W. Wood.
Honolulu, Oahu, H. I.	.....	.....	30.06	763.5	74	23.3	95	E	.....	.....	2	.....	.....	.....	.....	0	0	Clear	Daniel Smith.
Makawao, Maui, H. I.	.....	.....	29.98	761.5	68	20.0	60	Calm	.....	.....	0	0	0	.....	.....	0	0	.....	F. L. Clarke.

Marine Series.	True course towards.	Hourly rate in knots.	State of ocean.	Direction of swell from —	Weather.	Observer.
Schooner Addie Fuller, Tarpaulin Cove.	.....	.....	.....	.....	Snowing	Capt. James Jorgensen.

Note.—The originals give the cloudiness by the scale 0 to 4, except York Factory, Medellin and Paramaribo. The elevation of the barometer at Bismarck is 1,677 feet, or 511.1 meters; Cheyenne, 6,057.3 ft., or 1,846.2 m.; Clifton, about 2,892 ft., or 881.5 m.; Denver, 5,135 ft., or 1,565.2 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Florence, 1,550 (?) ft., or 472.5 (?) m.; Makawao, 2,205 ft., or 672.1 m.; Morgantown, 1,027.9 ft., or 313.3 m.; Medellin, 4,870 ft., or 1,486.2 m.; Mt. Washington, 6,285 ft., or 1,915.6 m.; North Platte, 2,846 ft., or 867.4 m.; Omaha, 1,054.6 ft., or 321.4 m.; Pike's Peak, 14,150.7 ft., or 4,313.1 m.; Salt Lake City, 4,362.2 ft., or 1,329.6 m.; Santa Fé, 6,862.2 (?) ft., or 2,091.6 (?) m.; Tucson, 2,513 (?) ft., or 772.1 (?) m.; Virginia City, 5,480 (?) ft., or 1,670.3 (?) m.; Yankton, 1,278 ft., or 389.5 m. The following constants are added in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Denver, 5.22 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fé, 6.54 in.; Tucson, 2.59 in.; Virginia City, 5.48 in. The elevation of Batavia is about 6 feet; the barometric readings need the addition of 0.2 mm. or 0.01 in. for reduction to sea-level.

UNITED STATES NAVAL SERIES.

By authority of the SECRETARY OF THE NAVY.

Furnished by the coöperation of the Navy Department, through Commodore Daniel Ammen, U. S. N., Chief of Bureau of Navigation.

STATIONS AND VESSELS.	TRUE COURSE TOWARDS.	HOURLY RATE IN KNOTS.	*BAROMETER AS REPORTED.		TEMPERATURE OF THE AIR.		RELATIVE HUMIDITY.	WIND.				CLOUDS.				RAIN-FALL OR MELTED SNOW IN THE PAST 24 HOURS.		STATE OF OCEAN.	DIRECTION OF SWELL FROM—	WEATHER.	OBSERVER.
								Direction.	Velocity		Force.	Amount.		Direction.							
			Inches.	Millimeters.	Fahrenheit.	Centigrade.	Per cent.	From—	Miles per hour.	Meters per second.	0—10.	Up'er 0—10.	Low'r 0—10.	Up'er From—	Low'r From—	Inches.	Millimeters.				
Naval Academy, Naval Hospital, Santee,	Annapolis, Md.																				
Monongahela, Baltim're, Md.																					
Wabash, Boston, Mass.																					
Michigan, Erie, Pa.																					
Hartford, Hampton Rds., Va.																					
St. Louis, League Island, Pa.																					
Navy Yard, Mare Island, Cal.																					
Rio Bravo, Matamoras, Mex.																					
Alarm, New York, N. Y.																					
Colorado, New York, N. Y.																					
Franklin, New York, N. Y.																					
Intrepid, New York, N. Y.																					
Minnesota, New York, N. Y.																					
Swatara, New York, N. Y.																					
Canonicus, New Orleans, La.																					
Ossipee, New Orleans, La.																					
Essex, Norfolk, Va.																					
Navy Yard, Norfolk, Va.																					
Omaha, Panama																					
Pensacola, Panama																					
Navy Yard, Pensacola, Fla.																					
Plymouth, Pensacola, Fla.																					
Navy Yard, Portsmouth, NH.																					
Adams, Port Royal, S. C.																					
Ajax, Port Royal, S. C.																					
Catskill, Port Royal, S. C.																					
Dictator, Port Royal, S. C.																					
Huron, Port Royal, S. C.																					
Lehigh, Port Royal, S. C.																					
Manhattan, Port Royal, S.C.																					
New Hampshire, Port R., SC.																					
Navy Yard, Wash'gton, D. C.																					
Tallapoosa, Wash'gton, D. C.																					
Wyoming, Washington, D. C.																					

* It is not known that the barometer is corrected for temperature, instrumental error or elevation.

COLLATED AT THE OFFICE OF THE CHIEF SIGNAL OFFICER OF THE ARMY, WASHINGTON, D. C.

The records which appear in this Bulletin are copied from the regular exchanges of this office, made in each instance in compliance with an especial request, and are published for the uses of the coöperating observers. The barometric readings in the first two columns are reduced to freezing and their respective standards; those in the second two also to mean sea-level. The "weather" is generally published as given.

When the distinction between the upper and lower strata of clouds is not reported, the *kinds* or *types*, viz: cirrus, cumulus, stratus, nimbus, scud, fracto, pallio, haze, fog and smoke, as indicated, respectively, by the letters c, k, s, n, d, f, p, hz., fg. and sm'e, are generally published with the amount in the lower-cloud column. The distinction between the upper and lower strata is carefully made in the United States Series and a portion of the Canadian Series, and the *types* are indicated by the above letters or their combinations in the proper column.

Albert J. Myer

Brig. Gen. (Bvt. Assg^d.) Chief Signal Officer, U. S. A.

BULLETIN

OF

INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON JANUARY 3, 1877.

7:35 A. M. WASHINGTON mean time.

0:7 A. M. MEXICO mean time.
7:7 A. M. SAN JOSE mean time.
0:6 P. M. LISBON mean time.
0:28 P. M. MADRID mean time.
0:48 P. M. GREENWICH mean time.
0:53 P. M. PARIS mean time.
1:1 P. M. BRUSSELS mean time.
1:4 P. M. UTRECHT mean time.
1:18 P. M. BERNE mean time.

1:26 P. M. CHRISTIANIA mean time.
1:33 P. M. COPENHAGEN mean time.
1:33 P. M. ROME mean time.
1:37 P. M. BERLIN mean time.
1:49 P. M. VIENNA mean time.
1:55 P. M. STOCKHOLM mean time.
2:18 P. M. ATHENS mean time.
2:39 P. M. CONSTANTINOPLE mean time.
2:44 P. M. ST. PETERSBURG mean time.

ALGERIAN SERIES.

Furnished by the coöperation of General d'Eudeville, Commandant Supérieur du Génie in Algeria.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Nemours	.....	.....	30.00	762.0	65.1	18.4	52	Calm	.....	.....	0	.....	8	.....	.....	0	0	Cloudy.....	Charnot.
Algiers	.....	.....	29.94	760.5	68.5	14.7	.....	SW	.....	.....	3	.....	0	.....	.....	0.087	2.2	Clear.....	Peter.
La Calle	.....	.....	30.07	763.6	66.6	19.2	61	S	.....	.....	4	.....	1	.....	.....	0	0	Clear.....	Fleury.
Tunis	.....	.....	30.18	766.5	64.4	18.0	.....	WNW	.....	.....	4	.....	1	.....	.....	0	0	Clear.....	Jacques.
Sfax	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Millot.
Saida	.....	.....	30.00	762.1	62.6	17.0	52	S	.....	.....	4	.....	2	.....	.....	0	0	Clear.....	Bourgeois.
Tebessa	.....	.....	30.17	766.2	58.1	14.5	.....	S	.....	.....	1	.....	0	.....	.....	0	0	Clear.....	Lemaillot.
Geriville	.....	.....	30.09	764.2	54.7	12.6	29	SSW	.....	.....	2	.....	6	.....	.....	0	0	Fair.....	Guyot.
Laghouat	.....	.....	30.07	763.8	59.4	15.2	35	W	.....	.....	1	.....	0	.....	.....	0	0	Clear.....	Kuntz.
Biskra	.....	.....	30.27	767.9	64.6	18.1	50	NE	.....	.....	1	.....	4	.....	.....	0	0	Fair.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

NOTE.—In the originals the distinction between the amount of upper and lower clouds is apparently not made. The weather is published as given. The rain-fall is measured at 7 a. m., local time.

AUSTRIAN SERIES.

Furnished by the coöperation of Professor Ferdinand Osnaghi, Director of the Imperial and Royal Central Meteorological Institute at Vienna.

Agram	.....	.....	30.08	764.1	55.8	13.2	72	SW	.....	.....	3	.....	2	.....	.....	0	0	.....	Prof. Ivan Stoair.
Cracow, I. R. Observatory	.....	.....	30.07	763.8	37.8	3.2	90	W	.....	.....	1	.....	10	.....	.....	0	0	.....	Dr. Wierzbiski.
Eperies	.....	.....	30.13	765.2	33.8	1.0	94	Calm	.....	.....	0	.....	10	.....	.....	0	0	Foggy	Julius Mikolik.
Gratz	28.78	730.9	30.05	763.3	44.6	7.0	77	SW	.....	.....	1	.....	0	.....	.....	0	0	.....	Andreas Rospini.
Hermannstadt	28.70	729.0	30.15	765.9	45.9	7.7	76	SW	.....	.....	1	.....	0	.....	.....	0	0	.....	Prof. Reissenberger.
Kremsmünster	28.59	726.2	29.97	761.3	38.5	3.6	83	Calm	.....	.....	0	.....	0	.....	.....	0	0	.....	Prof. C. Wagner.
Lemberg	.....	.....	30.09	764.3	37.9	3.3	92	NW	.....	.....	1	.....	9	.....	.....	0	0	.....	Dr. T. Stanecki.
Nyiregyhaza	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Habzsuda Daniel.
Pola	.....	.....	30.18	766.5	49.1	9.5	91	WNW	.....	.....	1	.....	10s	.....	.....	0	0	Foggy	I.R.Hydrographic Of'ce.
Szegedin	.....	.....	30.11	764.8	46.9	8.3	79	S	.....	.....	2	.....	5	.....	.....	0.051	1.30	.....	Karl Stancel.
Trieste	.....	.....	30.20	767.0	48 4	9.1	99	Calm	.....	.....	0	.....	10	.....	.....	0.016	0.4	Rain and fog	Prof. V. Farolfi.
Vienna	.....	.....	30.01	762.2	41.7	5.4	86	Calm	.....	.....	0	.....	1	.....	.....	0	0	.....	I. R. Central Met. Obs'y.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 7 p. m., local time. The elevation of Gratz is 343.5 meters, or 1,126.9 feet; Hermannstadt, 407.8 meters, or 1,337.9 feet; Kremsmünster, 383.6 meters, or 1,258.5 feet.

BELGIAN SERIES.

Furnished by the coöperation of J. C. Houzeau, Director of the Royal Observatory at Brussels.

Arlon	.....	.....	29.80	757.0	47.8	8.8	80	SSW	.....	.....	2	.....	5	.....	.....	0	0	.....	
Brussels	.....	.....	29.63	752.6	49.5	9.7	92	S	.....	.....	2	.....	10	.....	SW	0.039	1.0	Raining.....	Royal Observatory.
Furnes	.....	.....	29.56	750.9	48.0	8.9	95	SSE	.....	.....	2	.....	2	.....	.....	0.228	5.8	.....	
Maeseyck	.....	.....	29.70	754.4	48.2	9.0	87	S	.....	.....	2	.....	10	.....	.....	0.024	0 6	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

NOTE.—In the originals, the weather is occasionally given in general notes.

BRITISH SERIES

Furnished by the coöperation of Robert H. Scott, Esq., Director of the Meteorological Office, London, Alexander Buchan, Secretary of the Scottish Meteorological Society, Edinburgh, and the respective Observers.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Upper. 0—10.	Clouds. Amount. Lower. 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Aberdeen			29.80	756.9	25.6	— 3.6		W	10	4.5			7			0	0	*D. clouds	William Boswell.
Ardrossan			29.60	751.8	35	1.7		ENE			3		9					Misty	William McNeil.
Armagh, Observatory			29.35	745.5	34.1	1.2		ENE	23	10.3			10					Snowing	S. Call, for Dr. Robinson.
Birr Castle, (Parsonstown)			29.06	738.1	41.1	5.1		ESE			3–4		10					Raining	J. Dreyer.
Bradford			29.54	750.3	33.1	0.6		NE			1		10			0	0	Overcast	J. McLandsborough.
Bridgetown, (Barbados)			30.00	762.0	85	29.4		NE			3		6					*D. clouds	Sergt. J. F. Halanen, A.
Cambridge, Observatory			29.44	747.8	46.0	7.8		E			2		10					Raining	H. Todd. [H.C.
Cardington			29.42	747.3	47.0	8.3		SE			2		10					Raining	John McLaren.
Carlisle																			T. Pell, for J. Cartmell.
Chatham, School M. E.			29.47	748.5	49.2	9.6		SW			2		10					Raining	Maj. C. N. Martin, R.E.
Dartmoor	27.84	707.1	29.32	744.7	49.4	9.7		S			5		10					Raining	R. E. Power.
Davos Platz, (Switzerland)	24.84	630.9			35.2	1.8	71	E			1		2			0	0	*D. clouds	Francis Redford, M. A.
Donaghadee			29.41	747.0	40	4.4		E			7		10					Raining	J. Mac Gowan.
Dover			29.50	749.3	49	9.4		S			4		8					Raining	J. Costello.
Eccles, (near Manchester)			29.43	747.6	36.1	2.3		NE	11.2	5.0			5					Squally	Thomas Mackereth.
Falmouth, Observatory			29.19	741.4	53.0	11.7		S			5		10					Raining	The Staff.
Fort Napier, (Natal)	27.68	703.1	29.92	760.0	60.4	15.8		SE			2		10					Raining	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.95	760.7	86.0	30.0		N			1		5					*D. clouds	
Galway, Queen's College			29.39	746.5	40	4.4		E			6		10					Gloomy	Prof. A. H. Curtis.
Gibraltar, (Mediterranean)			29.84	757.9	63.0	17.2		E			2		10					Gloomy	Corpl. C. Aitken, A. H. C.
Glasgow, Observatory			29.62	752.3	32.4	0.2		E			5		10					Squally	Lewis Stuart.
Great Yarmouth			29.54	750.3	43	6.1		E			6		8					Raining	G. T. Watson.
Greenwich, Royal Obs'y			29.44	747.8	49.9	9.9		S			3		10			blank	blank	Overcast	The Staff, for G. B. Airy.
Guernsey			29.37	746.0	52.5	11.4		SE			6		10					Raining	Dr. S. F. Hoskins.
Helston			29.22	742.2	53	11.7		SW			6		10n			0.77	19.6	Overcast	M. P. Moyle.
Holyhead			29.20	741.7	38	3.3		E			9		10					Raining	John Tilston.
Kew, Observatory			29.44	747.8	50.1	10.1		S	16	7.2			10					Drizzling	The Staff.
Kingstown			29.21	741.9	42	5.6		E			8		10					Raining	George Mitchell.
Leicester Museum			29.40	746.7	40.0	4.4		NE			4		10					Raining	Wm. J. Harrison, F.G.S.
Malta, (Mediterranean)			30.22	767.6	62.8	17.1		NW			2		4k					*D. clouds	Corp'l. P. Bravis, A.H.C.
Nairn			29.75	755.6	27	— 2.8		Calm			0		0					Clear	W. D. Penny.
Nassau, (Bahamas)			29.24	768.1	64.9	18.3		NW			8		5					*D. clouds	Surg. Maj. Henry.
Nottingham, Observatory			29.45	748.0	38.2	3.4		ENE			6		10n		ENE	0.739	18.77	Raining	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			29.40	746.7	38.4	3.6		ENE			4		10					Raining	Rev. Stephen Whitty.
Oxford, Radcliff Obs'y			29.38	746.2	49	9.4		SE			1		10					Raining	J. Lucas.
Plymouth			29.27	743.4	52.5	11.4		S			5		10					Raining	John Merrifield.
Roche's Point			29.01	736.8	51	10.6		S			5		8					Cloudy	W. Kennedy.
Saint Ann's Head			29.15	740.4	52	11.1		S			5		10					Overcast	John C. Walker.
Saint Heller, (Jersey)			29.39	746.5	53.0	11.7		SSE			4		10					Overcast	A. P. Amy.
Sandwick Manse, (Orkneys)			29.82	757.4	31.9	— 0.1		NE	19	8.6			6					*D. clouds	Rev. C. Clouston, LL. D.
Scarborough																			F. Shaw.
Scutari Cemetery, (Turkey)			30.21	767.3	55.5	13.1		S			1		7					*D. clouds	Sergt. W. H. Lyne.
Sheffield			29.55	750.6	35.4	1.9		NE			1		10			0.815	20.70	Rain & snow	W. F. Cooper.
Silloth Rectory			29.47	748.5	34.0	1.1	83	NE			7		10			0.330	8.38	Overcast	Rev. Francis Redford
Stonyhurst, Observatory			29.51	749.5	34.8	1.3		E			4		10n					Snowing	Rev. S. J. Perry.
Stornoway, Lewis C., (Hebr.)			29.74	755.4	34	1.1		E			5		10					Overcast	John Smith.
Strathfield Turgiss			29.40	746.7	49.8	9.9		SE			2		10					Raining	Rev. Charles H. Griffith.
Thurso			29.79	756.7	37	2.8		NE			3		7					*D. clouds	John Trotter.
Truro, Royal Institution			29.19	741.4	53	11.7		S			8		10					Raining	W. Newcombe.
Valencia, Observatory			28.88	733.5	52.1	11.2		SSE	32	14.3			10					*D. clouds	The Staff.
SUB-SERIES.																			
Calf of Man, (Isle of Man)					40	4.4		E			8		10			0	0		Henry Mercer.
Cape Good Hope, Obs'y			30.14	765.5	79.0	26.1	39	W	13	5.8		2	6						The Staff, for E. J. Stone.
Hobart Town, (Tasmania)			29.83	757.7	67.0	19.4	100	Calm			0		10n			0.05	1.3	Raining	Francis Abbott, F.R.A.S.
Leith, Restalrig Park			29.72	754.9	37.0	2.8		E			4		10ks			0	0	Cloudy	Andrew Gibb.
Mauritius, Observatory			29.99	761.7	84.0	28.9	59	ENE	16.3	7.3		1	5		E	0.003	0.08	Squally	C. Meldrum.
Melbourne, Observatory			29.89	759.2	56.4	13.6	80	SE	6	2.7			5			0	0	Fine	R. L. J. Ellery.
Monach L't-house, (Hebrides)			29.56	750.8	36	2.2		E			7		10			0	0		J. Youngclause.
North Unst, (Shetland Is.)			29.84	757.9	30	— 1.1		NE			7	4	10	N		Blank	Blank		Robert Burnet.

NOTE.—Generally, the originals do not give the relative humidity, rain-fall, or distinction between upper and lower clouds. The originals give the wind direction to 32 points and weather by the Beaufort notation. The originals give the barometer for Aberdeen, Cardington, Galway, Oxford, St. Heller, Sandwick, Scarborough, Stonyhurst, Leith, Monach and North Unst as read off and the cloudiness for Stornoway by the scale 0 to 4. The wind-force is given by the scale 0 to 12 in the official series; 0 to 6 in the sub-series; except in U.S. per square foot for Greenwich and Hobart Town. The rain-fall is measured at Aberdeen at 10 a. m.; Bradford, 9 a. m.; Hobart Town, 7:30 a. m.; Nottingham, 6 p. m.; Mauritius, 9 a. m., local time. The elevation of Dartmoor is 1,400 feet, or 426.7 meters; Davos Platz, 5,1052 feet, or 1,556.02 meters; Fort Napier, 2,200 feet, or 670.6 meters. *Detached clouds.

By authority of the Minister of Foreign Affairs.

COSTA RICA SERIES.

Furnished by the coöperation of Senor Federico Maison, Director of the Central Office of Statistics and Meteorology.

San José																			

DANISH SERIES.

Furnished by the coöperation of Captain N. Hoffmeyer, Director of the Royal Danish Meteorological Institute at Copenhagen.

Copenhagen			29.90	759.4	29.8	— 1.2	74	SE			2		8						
Fanöe			29.89	759.1	25.9	— 3.4	98	E			2		10					Foggy	
Godthaab, (Greenland)			30.11	764.7	22.5	— 5.3	76	E			2		10						
Stykkisholm, (Iceland)			30.00	762.1	18.1	— 7.7	95	E			6		5						
Thorshavn, (Faröe)			29.97	761.1	34.2	1.2	70	E			2		3						
Vestervig			29.86	758.4	24.8	— 4.0	95	S			2		0						

NOTE.—The originals give the wind-force by the scale 0 to 6; occasionally, weather by Vienna symbols; no distinction between the amount of upper and lower clouds.

FRENCH SERIES.

Furnished by the coöperation of His Excellency, U. J. Le Verrier, Director of the Paris Observatory, and the respective Observers.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Alençon	.....	.....	29.60	751.7	48.2	9	79	S	.....	.....	2	.....	5kn	.....	S	0.08	2.	Cloudy	Normal School.
Amiens	.....	.....	29.57	751.0	51.1	10.6	93	S	.....	.....	3	.....	10	.....	.....	0.228	5.8	Covered	Normal School.
Avignon	.....	.....	30.03	762.8	56.1	13.4	66	SE	.....	.....	2	.....	8	.....	SSE	0	0	Very cloudy	Normal School.
Bar-sur-Seine	.....	.....	29.71	754.5	55.2	12.9	52	SSE	.....	.....	2	.....	5cn	.....	S	0	0	Cloudy	C. Saillard.
Beaumette, (near Angers)	.....	.....	29.48	748.7	57.0	13.9	53	S	11.6	5.2	.....	.....	.....	.....	S	0.012	0.3	.....	Beaumette Observ'tory.
Beauvais	.....	.....	29.61	752.0	52.2	11.2	71	SSE	.....	.....	2	.....	10	.....	SW	0.128	3.25	Covered	Normal School.
Besançon	.....	.....	29.85	758.1	53.6	12.0	49	S	.....	.....	3	.....	2	.....	SW	0	0	Slightly cl'dy	Normal School.
Bourg en Bresse	.....	.....	29.90	759.4	53.1	11.7	85	SE	.....	.....	8	.....	5k	.....	NW	0	0	Cloudy	Normal School.
Bourges	.....	.....	29.68	752.5	55.8	13.2	68	SE	.....	.....	2	.....	2	.....	SSE	0	0	Slightly cl'dy	Normal School.
Brest	.....	.....	29.24	742.6	53.8	12.1	87	SSW	.....	.....	4	.....	9	.....	SSW	0.846	21.50	.....	Naval Observatory.
Carcassonne	.....	.....	29.78	756.4	54.5	12.5	73	E	.....	.....	3	.....	5	.....	W	0	0	Cloudy	Normal School.
Caen	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Chartres	.....	.....	29.58	751.3	55.2	12.9	77	S	.....	.....	2	.....	8	.....	NE	0	0	.....	Normal School.
Châlons-sur-Marne	.....	.....	29.73	755.2	60.1	15.6	50	S	.....	.....	2	.....	5n	.....	N	0	0	Cloudy	Normal School.
Clermont	.....	.....	29.71	754.5	55.0	12.8	63	SW	.....	.....	3	.....	5	.....	S	0	0	Cloudy	Puy de Dome Obs'y.
Commercy	.....	.....	29.80	757.0	49.6	9.8	72	SW	.....	.....	4	.....	5cs	.....	SW	0	0	Cloudy	Normal School.
Commune de Gréasque*	.....	.....	30.13	765.2	53.8	12.1	67	SE	.....	.....	4	.....	10	.....	SE	0	0	.....	M. Kina.
Grenoble	.....	.....	29.93	760.2	46.9	8.3	68	ENE	.....	.....	2	.....	5cs	.....	E	0	0	Cloudy	Normal School.
La Roche-sur-Yon	.....	.....	29.54	750.2	54.0	12.2	72	SE	.....	.....	6	.....	8	.....	NE	0	0	Very cloudy	Normal School.
Le Mans	.....	.....	29.56	750.7	52.2	11.2	56	SW	.....	.....	4	.....	5	.....	SW	0.030	0.75	Cloudy	Normal School.
Lons-Le-Saulnier	.....	.....	29.78	756.4	53.8	12.1	52	SW	.....	.....	2	.....	2	.....	.....	0	0	Slightly cl'dy	Normal School.
Lorient	.....	.....	29.41	746.9	55.8	13.2	77	SSE	.....	.....	4	.....	10	.....	.....	0.449	11.4	Raining	Naval Observatory.
Mâcon	.....	.....	29.99	761.7	54.3	12.4	95	S	.....	.....	4	.....	5	.....	S	0	0	Cloudy	Normal School.
Metz	.....	.....	29.85	758.1	49.1	9.5	81	S	.....	.....	2	.....	8	.....	S	0	0	.....	M. Schuster.
Mirecourt	.....	.....	29.81	757.1	50.5	10.3	74	SW	.....	.....	6	.....	5	.....	W	0	0	Cloudy	Normal School.
Nismes	.....	.....	30.00	762.0	56.5	13.6	82	NE	.....	.....	6	.....	5	.....	NW	0	0	Cloudy	Normal School.
Orleans	.....	.....	29.47	748.5	51.4	10.8	70	SW	.....	.....	3	.....	5	.....	WSW	0.04	1.	Cloudy	Normal School.
Paris, Observatory	.....	.....	29.66	751.8	54.5	12.5	71	S	.....	.....	2	.....	9ck	.....	SW	0.030	0.77	Almost cov'd	National Observatory.
Parthenay	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Privas	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Rochefort, Observatory	.....	.....	29.98	761.6	52.2	11.2	.....	S	.....	.....	2	.....	10	.....	S	0	0	Covered	Normal School.
Rouen	.....	.....	29.54	750.2	55.4	13.0	64	SSE	.....	.....	4	.....	5	.....	N	0.138	3.5	¾ covered	Naval Observatory.
Saint Lo	.....	.....	29.56	750.8	54.1	12.3	61	SSE	.....	.....	2	.....	2	.....	S	0.197	5.0	Slightly cl'dy	Normal School.
Tarbes	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Villefranche	28.63	727.2	29.71	754.5	52.7	11.5	76	SSW	.....	.....	2	.....	5	.....	E	0	0	Cloudy	Normal School.
	.....	.....	29.87	758.8	53.6	12	81	SE	.....	.....	6	.....	5	.....	E	0	0	Cloudy	Normal School.
Sub-Series.																			
Fort de France, Martinique	.....	.....	29.92	760.0	78.8	26	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	L'Abbé Marchési.
Marseilles	.....	.....	30.06	763.4	57.6	14.2	67	SE	.....	.....	3	.....	10	.....	.....	.....	.....	Rainy	Marseilles Observatory.
Mont-Louis	24.71	627.6	30.02	762.6	42.4	5.8	52	SSW	44.7	20.00	.....	.....	5	.....	SSW	0	0	.....	—. Falguère.
Montsouris, Paris	.....	.....	29.61	752.0	53.6	12.0	64	S	.....	.....	2	.....	8	.....	SW	0.010	0.4	.....	Montsouris Observatory
Perpignan	.....	.....	29.79	756.7	52.3	11.3	73	SE	3.7	1.67	.....	.....	7	.....	SW	0	0	.....	Dr. Fines.
Pic du Midi, (Summit,) H. P.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. Baylac.
Pic du Midi, (Plantade,) H. P.	22.28	565.8	.....	.....	39.6	4.2	.....	SW	.....	.....	8	.....	7	.....	.....	.....	.....	Snowy	General de Nansouty.
Saint Maur, (near Paris)	.....	.....	29.80	751.8	56.3	13.5	53	SSE	.....	.....	2	.....	10	.....	.....	0.020	0.5	.....	E. Renou.
Toulouse	.....	.....	29.71	754.7	54.1	12.3	71	SSE	.....	.....	4	.....	9	.....	.....	Inap.	Inap.	.....	Toulouse Observatory.
Tours	.....	.....	29.66	753.7	55.4	13.0	53	SW	.....	.....	2	.....	5	.....	W	0	0	.....	C. Marquet.
Versailles, (near Paris)	.....	.....	29.60	751.8	54.7	12.6	61	SW	.....	.....	2	.....	10	.....	.....	0.03	0.8	Covered	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai)	.....	.....	30.51	774.9	32.5	0.3	76	NNE	3.8	1.7	.....	.....	0	.....	.....	0	0	.....	Marc Dechevrens, S. J.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—Generally, the originals give the wind-force by the scale 0 to 7; no distinction between upper and lower clouds, and, in the official series, the amount by the scale 0 to 4; the rain-fall as measured at 7, 8 or 9 *a. m.*, local time; at Clermont, 9 *a. m. of the following day*; the weather in general terms as published. The elevation of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; Clermont, 388 meters, or 1,272.9 feet; Commune de Gréasque, 322 meters, or 1,056.4 feet; Pic du Midi, (Summit,) 2,877 meters, or 9,439.1 feet; Pic du Midi, (Plantade,) 2,336 meters, or 7,762.6 feet; Tarbes, 308 meters, or 1,010 feet. In correcting the Mont-Louis barometric observations for altitude, the constant 135. millimeters has been added. *Bouches-du-Rhône

GERMAN SERIES.

Furnished by the coöperation of Professor Dr. G. Neumayer, Director of the German Naval Observatory, Hamburg.

Bamberg	.....	.....	29.87	758.7	47.8	8.8	77	W	.....	.....	3	.....	4	W	.....	0.079	2.0	.....	Prof. T. Hoh.
Berlin	.....	.....	29.90	759.5	36.6	2.5	91	S	.....	.....	1	.....	10	.....	.....	0.024	0.6	Raining	Prof. Arndt.
Breslau	.....	.....	29.99	761.7	37.0	2.8	89	SE	.....	.....	3	.....	10	.....	.....	0.035	0.9	Smoke-haze	Royal University Obs'y.
Carlsruhe	.....	.....	29.80	757.0	50.7	10.4	70	SE	.....	.....	1	.....	8	.....	.....	0.028	0.7	.....	A. Senx.
Cassel	.....	.....	29.82	757.3	44.8	7.1	70	SSE	.....	.....	1	.....	10	S	.....	0.024	0.6	.....	Dr. H. Möhl.
Crefeld	.....	.....	29.70	754.4	46.9	8.3	93	SE	.....	.....	2	.....	10	.....	.....	0.12	3.	.....	Director Lose.
Emden	.....	.....	29.79	756.6	35.6	2.0	89	NE	.....	.....	2	.....	10	.....	.....	0.087	2.2	.....	Prof. Prestel.
Frankfort on the Main	.....	.....	29.84	757.8	49.1	9.5	75	SSW	.....	.....	1	.....	3	.....	.....	0.039	1.0	.....	Physical Society.
Friedrichshafen	28.49	723.6	29.96	761.0	41.2	5.1	86	NW	.....	.....	2	.....	10	.....	.....	0	0	Light fog	M. Wilhelm.
Hamburg	.....	.....	29.85	758.3	35.6	2.0	85	SE	.....	.....	3	.....	10	.....	.....	0.020	0.5	Light fog	Captain F. Hegemann.
Kiel	.....	.....	29.86	758.4	34.0	1.1	90	SSW	.....	.....	2	.....	10	.....	.....	0	0	.....	Prof. G. Karsten.
Königsberg, (Prussia)	.....	.....	30.03	762.7	31.1	— 0.5	68	W	.....	.....	5	.....	4	.....	.....	0.047	1.2	.....	Prof. E. Luther.
Köslin	.....	.....	30.00	762.0	32.0	0.0	.....	S	.....	.....	1	.....	10	.....	.....	0	0	.....	H. Müller.
Leipsic	.....	.....	29.87	758.3	43.0	6.1	90	S	.....	.....	1	.....	9	WSW	.....	0.240	6.1	.....	Prof. Bruhns.
Memel	.....	.....	30.00	762.1	31.3	— 0.4	74	WNW	.....	.....	4	.....	5k	W	.....	0.020	0.5	.....	Reinbrecht & Skalweit.
Münster	.....	.....	29.76	756.0	44.6	7.0	94	SE	.....	.....	2	.....	10	.....	.....	0.268	6.8	.....	Prof. E. Heis.
Neufahrwasser	.....	.....	30.02	762.4	31.5	— 0.3	81	SSW	.....	.....	2	.....	7	.....	.....	0	0	.....	A Lothe.
Posen	.....	.....	30.01	762.2	35.2	1.8	91	SE	.....	.....	2	.....	10	.....	.....	0	0	.....	Dr. Magener.
Strassburg, (in Alsace)	.....	.....	29.84	758.0	52.9	11.6	56	SW	.....	.....	2	.....	4	SW	.....	0.059	1.5	.....	Dr. Schur.
Stuttgart	.....	.....	29.85	758.2	51.3	10.7	55	E	.....	.....	1	.....	2	.....	.....	0	0	.....	Prof. Schoder.
Thorn	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Dr. Hasenbalg.
Treves, (Trier)	.....	.....	29.71	754.7	50.7	10.4	69	W	.....	.....	1	.....	5	.....	.....	0.004	0.1	Foggy	Prof. Flesch.
Weissenburg, (Bavaria)	28.38	720.8	29.89	759.3	47.6	8.6	59	S	.....	.....	4	.....	3	S	.....	Inap.	Inap.	.....	Dr. von Bebber.
Wustrow, Naval School	.....	.....	29.96	761.0	32.5	0.3	98	ESE	.....	.....	2	.....	7	.....	.....	0	0	.....	E. F. Schütz.
German Naval Series.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—The elevation of Friedrichshafen is 413.4 meters, or 1,356 9 feet; Weissenburg, 431 meters, or 1,414.0 ft. In the originals the distinction between the amount of upper and lower clouds is not made. It is not always certain that the remarks in the weather column refer to the moment of observation.

GREEK SERIES.

Furnished by the coöperation of Professor Dr. J. F. Julius Schmidt, Director of the Royal Observatory at Athens.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Athens			30.22	767.6	58.6	14.8		N										⅔ clear	

Note.—The originals give the barometer corrected, but not reduced to sea-level; occasionally the kind of clouds; the weather as published. They omit the humidity, wind-force, amount of cloudiness and rain-fall.

ITALIAN SERIES.

Furnished by the coöperation of His Excellency the Minister of Agriculture, Industry and Commerce, and the respective Observers.

Udine			30.17	766.3	46.9	8.3	96	Calm	0	0			10			0.402	10.2	Rain & fog...	Prof. Giovanni Clodig.
Stelvio	22.13	562.1	30.23	767.9	21.2	— 6.0		W			4		7	N		0	0		Signora Ernesta Manfredi.
Valdobbia	22.18	563 3	30.20	767.1	21.6	— 5.8	68	NE			2		10	W				Snowing	Ab. Dom. Mongini.
Padua			30.17	766.2	44.8	7.1	96	NNW	0.7	0.3			10			0.189	4.8	Raining	Prof. Dott. Lor nzoni.
Vicenza			30.17	766.2	47.1	8.4	89	SW	0	0			2	W		0.012	0.3	Foggy	Conte Alm. Da Schio.
Verona			30.13	765.3	44.8	7.1	84	E			2		10			0	0		Dott. B. Bertoncelli.
Bergamo	28.80	731.5	30.16	766.1	44.6	7.0	82	W			2		9			0	0		Prof. Trionfini Carlo.
Domodossola			30.19	766.9	43.5	6.4	73	Calm			0		9			0	0		Prof. Giuseppe Ulzi.
Milan			30.20	767.0	42.8	6.0	95	N			1		10			0.016	0.4	Light rain	Ab. Gio. Capelli.
Pavia			30.19	766.9	45.5	7.5	81	ESE			2		9	SW		0	0		Prof. Gio. Cantoni.
Moncalieri			30.20	767.1	43.9	6.6	88	NE	0.7	0.3			9	E		0	0		Prof. P. F. Denza.
Mondovi	28.22	716.8	30.20	767.0	46.0	7.8	66	ENE			2		4	W		0	0		Prof. D. C. Bruno.
Porto Maurizio			30.20	767.1	54.7	12.6	78	E			2		4	WSW		0	0		Prof. L. Vassallo.
Genoa			30.16	766.0	58.1	14.5	69	SE	0	0			0			0	0		Prof. G. M. Garibaldi.
Piacenza			30.21	767.2	44.8	7.1	88	E	0.7	0.3			10			0	0		Dott. G. Manzi.
Parma			30.20	767.1	45.7	7.6	83	W			2		7			0	0		Prof. P. Pigorini.
Florence			30.21	767.4	56.3	13.5	76	W			2		4	SW		0	0		Cav. F. Meucci.
Leghorn			30.19	766.7	57.4	14.1	77	SSE	0	0				WSW		0.059	1.5	Raining	Prof. P. Monte.
Siena	28.95	735.4	30.19	766.7	52.5	11.4	89	S	0	0			3	E		0	0		Prof. L. Toscani.
Urbino	28.61	726.8	30.21	767.3	49.6	9.8	83	WSW			2		4			0	0		Prof. P. Serpieri.
Pesaro			30.24	768.1	40.5	4.7	98	N	0	0			9	N		0	0	Foggy	Prof. Luigi Guidi.
Ancona			30.21	767.4	43.9	6.6	95	W			2		10			0	0	Foggy	Prof. F. De— Bosis.
Grosseto			30.18	766.5	58.3	14.6	75	NE			2		5	SE		0	0		Avv. P. Ponticelli.
Rome			30.20	767.0	61.2	16.2	71	WSW	3.8	1.7			3	SE		0	0		Prof's. P. Secchi & L. Respighi.
Naples, O. U.			30.19	766.9	61.7	16.5	71	SW			1		1	N		0	0		Prof. L. Palmieri.
Lecce			30.24	768.0	58.6	14.8	80	ESE	11.2	5.0			8			0	0		Prof. C. De—Giorgi.
Cosenza			30.22	767.5	59.0	15.0	72	NE	0.7	0.3			1			0	0		Prof. F. D. Conti.
Cagliari																			Prof. A. Pacinotti.
Ilioposto, (Sicily)			30.09	764.2	60.4	15.8	71	Calm			0		0			0	0		Prof. F. Cafiero.
Palermo			30.16	766.0	61.7	16.5	67	NE	3.8	1.7			0			0	0		Prof. G. Cacciatore.
Caltanissetta	28.22	716.7	30.20	767.1	55.4	13.0	66	NW			2		0			0	0		Prof. A. Pagani.
Siracusa			30.16	766.1	59.7	15.4	81	E			1		0			0	0		Prof. V. Giuliano.
Sub-Series.																			
Naples, S. R.			30.24	768.2	59.0	15.0	74	SW	0	0			9	W		0	0		Prof. F. Brioschi

Note.—The originals give the wind-force by the scale 0 to 4, or the velocity in kilometers per hour; generally, no distinction between upper and lower clouds; occasionally the weather by the Vienna symbols. The elevation of Stelvio is 2,543.0 meters, or 8,342.9 feet; Valdobbia, 2,548.0 meters or 8,359.3 feet; Bergamo, 379.6 meters, or 1,245.3 feet; Mondovi, 556 meters, or 1,824.2 feet; Urbino, 45 meters, or 1,479.7 feet; Siena, 348.5 meters, or 1,143.3 feet; Caltanissetta, 570.3 meters, or 1,871.0 feet.

JAPANESE SERIES.

Tokei																			

MEXICAN SERIES.

By authority of the Secretary of Public Works.

Furnished by the coöperation of Senor Mariano Barcena, Director of the Central Meteorological Observatory in the City of Mexico.

Mexico																		Mariano Barcena. Vicente Reyes. Miguel Perez. (Engineers in charge.)	

Note.—The elevation of Mexico is 2,290 meters, or 7,512.9 feet. The rain-fall is measured at 6 a. m., local time.

NETHERLANDS' SERIES.

Furnished by the coöperation of Professor Buys Ballot, Director of the Royal Meteorological Institute of the Netherlands at Utrecht.

Flushing			29.62	752.4	45.7	7.6		SSE			3					0.142	3.6		
Groningen			29.72	754.8	36.3	2.4		E			3					0	0		
Helder			29.70	754.3	38.5	3.6		E			4					0.291	7.4		
Utrecht			29.64	752.9	41.5	5 3	96	E			2		10			0.220	5.6	Dull	

Note.—The originals give the wind-pressure in kilograms per square meter; for Utrecht, they give the weather as published, from which the amount of cloudiness is taken by the scale 0 to 4, without distinguishing between upper and lower clouds. It is assumed that the barometer readings have been reduced to sea-level.

NORWEGIAN SERIES.

Furnished by the coöperation of Professor H. Mohn, Director of the Royal Norwegian Meteorological Institute at Christiania.

Bergen			29.69	754.0	30.6	— 0.8	77	SSE	13.7	6.1			10			0	0		
Brönö			29.98	761.4	6.1	—14.4	61	ENE	8.9	4			2						
Christiania			29.97	761.2	0.7	—17.4	89	E	8.3	3.7			2			0	0		
Tromsö			29.76	755.9	14.0	—10.0	26	SW	13.4	6			5			0.157	4.0		

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols. The cloudiness and weather at Bergen refer to 2h., p. m., local time, instead of 1h., 4 min.

PORTUGUESE SERIES.

Furnished by the coöperation of J. C. de Brito Capello, Director of the Meteorological Observatory of the Infante Don Luiz at Lisbon.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Angra, (Azores)	.....	.....	29.68	753.8	50.0	10.0	68	WNW	11.2	5.0	.....	.....	5	.....	.....	0.181	4.6	.....	Dr. J. A. Sampaio.
Campo Major	.....	.....	29.61	752.0	54.9	12.7	95	SE	18.1	8.1	.....	.....	10	SE	.....	0.165	4.2	.....	Dr. A. M. R. dos Santos.
Funchal, (Madeira)	.....	.....	29.76	755.8	65.3	18.5	72	WSW	13.0	5.8	.....	.....	3	.....	.....	1.000	25.4	Raining	Capt. D. A. de Cunha.
Lisbon	.....	.....	29.50	749.4	58.1	14.5	94	WSW	22.7	10.6	.....	.....	10	.....	.....	0.780	19.8	.....	The Observatory.
Ponta Delguda, (Azores)	.....	.....	29.70	754.3	55.4	13.0	59	NW	13.0	5.8	.....	.....	4	.....	.....	0.079	2.0	.....	

Note.—The originals give the wind-velocity in kilometers per hour; occasionally, the weather by the Vienna symbols; the amount of cloudiness without distinguishing between upper and lower clouds; the barometer corrected but not reduced to sea-level. The rain-fall at Libson is measured at noon, instead of 0 h. 6 m., p. m.

RUSSIAN SERIES.

Furnished by the cooperation of Professor H. Wild, Director of the Imperial Central Physical Observatory of Russia, at St. Petersburg.

Warsaw	.....	.....	30.07	763.8	33.4	0.8	83	SW	2	1	.....	.....	10	.....	.....	.....	.....	.....	Astronomical Obs.
Wilna	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Astronomical Obs.
Dorpat	.....	.....	29.93	760.1	5.9	—14.5	77	WNW	11	5	.....	.....	0	.....	.....	.....	.....	.....	Physical Cabinet.
St. Petersburg	.....	.....	29.75	755.7	—13.5	—25.3	86	NW	18	8	.....	.....	2	.....	.....	.....	.....	.....	Central Physical Obs.
Kuopio	.....	.....	29.78	756.3	— 9.2	—22.9	92	N	18	8	.....	.....	5	.....	.....	.....	.....	.....	Ch. Forsten.
Kieff	.....	.....	30.07	763.7	34.7	1.5	66	WNW	9	4	.....	.....	4	.....	.....	.....	.....	.....	Physical Cabinet.
Nikolaiev	.....	.....	30.19	766.9	42.1	5.6	82	Calm	0	0	.....	.....	3	.....	.....	.....	.....	.....	Kurdakof.
Kertch	.....	.....	30.16	766.0	51.3	10.7	70	NW	9	4	.....	.....	0	.....	.....	.....	.....	.....	Lagorio.
Moscow	.....	.....	29.72	755.0	15.4	— 9.2	75	SE	4	2	.....	.....	1	.....	.....	.....	.....	.....	Meteorological Obs.
Lugan	.....	.....	29.89	759.2	39.0	3.9	82	WSW	27	12	.....	.....	2	.....	.....	.....	.....	.....	Meteorological Obs.
Archangel	.....	.....	29.40	746.7	—15.2	—26.2	79	NNE	18	8	.....	.....	10	.....	.....	.....	.....	.....	Ogorodnikof.
Tiflis	28.71	729.2	30.13	765.2	57.2	14.0	24	NNW	9	4	.....	.....	0	.....	.....	.....	.....	.....	Physical Observatory.
Astrakhan	.....	.....	29.98	761.5	44.6	7.0	71	SW	11	5	.....	.....	3	.....	.....	.....	.....	.....	Sebastianof.
Kasan	.....	.....	29.17	740.9	35.2	1.8	95	SW	16	7	.....	.....	10	.....	.....	.....	.....	Light rain	Physical Cabinet.
Orenburg	.....	.....	30.07	779.0	2.3	—16.5	75	N	9	4	.....	.....	0	.....	.....	.....	.....	.....	Tschernischef.
Ekaterinburg	28.27	718.1	29.22	742.3	34.5	1.4	82	SW	4	2	.....	.....	10	.....	.....	.....	.....	.....	Meteorological Obs.
Nukuss	.....	.....	30.35	770.9	38 1	3.4	73	SE	7	3	.....	.....	0	.....	.....	.....	.....	.....	
Kasaly	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Bobrof.
Tashkend	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Michelson.
Barnaul	.....	.....	30.25	768.8	21.2	— 6.0	82	SW	31	14	.....	.....	10	.....	.....	.....	.....	.....	Meteorological Obs.
Yeniseisk	.....	.....	30.07	763.6	— 3.5	—19.7	85	E	7	2	.....	.....	10	.....	.....	.....	.....	.....	Marks.
Irkutsk	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Uscloef.
Peking, (China)	.....	.....	30.55	775.9	15.8	— 9.0	63	Calm	0	0	.....	.....	9	.....	.....	.....	.....	.....	Physical Observatory.
Nertchinsk	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Meteorological Obs.
Vladivostock	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Nikolaievsk, on the Amoor	.....	.....	.....	.....	33.8	1.0	.....	E	9	4	.....	.....	10	.....	.....	.....	.....	Raining	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols; they omit the rain-fall. The elevation of Tiflis is 409 meters, or 1,341.8 feet; Ekaterinburg, 306.4? m., or 1,005.2? ft.; Tashkend, 494.2? m., or 1,621.3? ft.; Irkutsk, 392 m., or 1,286 ft.; Nertchinsk, 502.0? m., or 1,942.2? ft.; Oorga, 1,281.0? m., or 4,202.6? ft.

SPANISH SERIES.

Furnished by the coöperation of Antonio Aguilar, Director of the Royal Observatory at Madrid, and of Don Cecilio Pujazon, Captain R. N. Director of the Naval Observatory at San Fernando.

Madrid	.....	.....	29.81	757.2	48.2	9.0	75	S	16.4	7.33	.....	0	8	.....	.....	Inap.	Inap.	Cloudy	Royal Observatory.
San Fernando	.....	.....	29.85	758.2	62.4	16.9	69	S	15.9	7.1	.....	0	10	.....	S	1.650	41.9	.....	Naval Observatory.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

Note.—The originals give the weather in general terms, as published; rain-fall for San Fernando from preceding to following midnight; wind-velocity for Madrid in kilometers per hour.

SWEDISH SERIES.

Furnished by the coöperation of Professor R. Rubenson, Director of the Royal Swedish Meteorological Institute, at Stockholm, and of Dr. H. H. Hildebrandsson, Chief of the Meteorological Division of the Upsala Observatory.

Haparanda	.....	.....	29.97	761.1	—19.5	—28.6	50	N	.....	.....	2	.....	0	.....	.....	0	0	.....	
Umea	.....	.....	30.06	763.5	—17.3	—27.4	77	N	.....	.....	2	.....	0	.....	.....	0	0	.....	
Hernosand	.....	.....	30.08	763.9	—18.4	—28.0	88	N	.....	.....	2	.....	0	.....	.....	0	0	.....	
Stockholm	.....	.....	29.94	760.5	— 6.3	—21.3	93	Calm	.....	.....	0	.....	2	.....	.....	0.031	0.8	.....	
Wisby	.....	.....	29.94	760.4	24.4	— 4.2	91	SE	.....	.....	4	.....	7	.....	.....	0.020	0.5	.....	
Sub-Series.																			
Upsala	.....	.....	29.98	761.4	— 6.0	—21.1	100	NW	0	0	.....	.....	4	.....	.....	0.013	0.33	.....	Dr. Hildebrandsson.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

Note.—The originals give the wind-force by the scale 0 to 6, and Upsala also velocity in meters per second; occasionally, the weather by the Vienna symbols, or in general terms; no distinction between the amount of upper and lower clouds. The rain-fall is measured at 8 a. m., local time.

SWISS SERIES.

Furnished by the coöperation of Professor R. Wolf, Director of the Observatory at Zurich, and of Professor E. Plantamour, Director of the Observatory at Geneva.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Geneva	28.49	723.6	29.95	760.6	44.2	6.8	77	NNE	.....	.....	2	.....	5	.....	.....	0	0	Clouds	The Observatory.
Zurich	28.29	718.5	29.96	761.0	44.1	6.7	75	W	.....	.....	1	.....	2	.....	.....	0	0	Clear.....	The Observatory.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Note.—For Geneva the corresponding departures from the normal values are: Barometer, —4.1 mm; Thermometer, +5.4 cent.; Relative Humidity, —3 per cent.

Note.—The rain-fall is measured at Zurich at 7 a. m. on the following day. The originals give the barometer corrected but not reduced to sea-level; the wind-force by the scale 0 to 4 for Zurich; the amount of cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The elevation of Geneva is 408 meters, or 1,339 feet, and that of Zurich 470 meters, or 1,542 feet.

TURKISH SERIES.

Furnished by the coöperation of A. Coumbary, Effendi, Director of the Central Observatory at Constantinople, and of Professor C. V. A. Van Dyck, Superintendent of the Lee Observatory at Beirut.

Constantinople	.....	.....	30.24	768.2	57.9	14.4	66	SW	8	3.5	.....	.....	3	.....	WSW	0	0	.....	
F.o, (Persian Gulf)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Salonica	.....	.....	30.24	768.2	53.1	11.7	.....	NW	.....	.....	1	.....	10	.....	.....	.....	.....	.....	
Valona	.....	.....	30.21	767.4	59.4	15.2	.....	N	.....	.....	1	.....	5	.....	.....	.....	.....	.....	
Varna	.....	.....	30.06	763.5	55.4	13.0	.....	S	.....	.....	1	.....	0	.....	.....	.....	.....	.....	
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y	.....	.....	30.28	769.2	63.0	17.2	59	NNW	.....	.....	1	.....	1k	.....	SW	0	0	*D, clouds.....	Prof. C. V. A. Van Dyck.

Note.—The originals give the wind-force by the scale 0 to 7, (except Beirut, by the scale 0 to 12, and Constantinople velocity in meters per second;) the weather in general terms as published; no distinction between upper and lower clouds, and, except Constantinople and Beirut, the amount by the scale 0 to 4. It is assumed that the barometer is reduced to sea-level. * Detached clouds.

CANADIAN SERIES.

Furnished by the coöperation of Professor G. T. Kingston, Director of the Magnetic Observatory at Toronto, and Superintendent of the Meteorological Office of the Dominion of Canada, and the respective Observers. Those marked with a star (*) are also telegraphed daily to the office of the Chief Signal Officer, U. S. Army.

Bathurst, N. B	.....	.....	29.24	742.7	4.5	—15.3	72	NW	10	4.5	.....	.....	10	.....	.....	0.40	10.2	.....	Hon. J. Ferguson.
Brockville, Ontario	.....	.....	30.04	763.0	— 9	—22.8	.....	Calm	0	0	.....	.....	8s	.....	NW	0.05	1.3	Cloudy.....	W. R. Bigg.
*Chatham, N. B	.....	.....	29.26	743.2	4	—15.6	100	W	12	5.4	.....	.....	10s	.....	W	0.27	6.9	Cloudy.....	G. A. Blair.
Charlottetown, P. E. Island	.....	.....	29.23	742.4	8	—13.3	84	W	15	6.7	.....	.....	10n	.....	.....	0.800	20.32	Cloudy	H. J. Cundall, C. E.
Cornwall, Ontario	.....	.....	29.95	760.7	— 6.6	—21.4	100	W	.....	.....	1	0	1s	.....	.....	0	0	Bright.....	James Smith, M. A.
Dalhousie, N. B	.....	.....	29.35	745.5	.....	.....	.....	NW	.....	.....	1	.....	.....	.....	.....	0.30	7.6	Overcast.....	H. A. Johnson.
Esquimault, B. C	.....	.....	30.30	769.6	42.1	5.6	96	N	.....	.....	.....	.....	10n	.....	.....	0.80	20.3	Cloudy	W. H. Bevis.
Fredericton, N. B	.....	.....	29.48	748.8	2.8	—16.2	73	W	18	8.0	.....	..c	10ks	.....	NW	0.250	6.35	Blustering...	Prof. Harrison.
*Fort Garry, Manitoba	.....	.....	30.35	770.9	—12	—24.4	85	S	4	1.8	.....	2c	Hazi	.....	S	0	0	Fair	James Stewart.
Goderich, Ontario	.....	.....	30.16	766.1	8.8	—12.9	69	Calm	.....	.....	0	.....	10n	.....	.....	0.15	3.8	Light snow..	H. J. Strang, M. A.
Granton, Ontario	28.89	733.8	30.10	764.5	8.2	—13.2	.....	NE	.....	.....	1	.....	10n	.....	.....	0	0	Cloudy.....	James Grant.
*Halifax, N. S	.....	.....	29.50	749.3	11	—11.7	77	W	20	8.9	.....	.....	8n	.....	.....	0.410	10.41	Fair	F. Allison, M. A.
Hamilton, Ontario	.....	.....	30.12	765.0	8.3	—13.2	85	NE	.....	.....	1	3ck	0	.....	.....	0.03	0.8	Fair	G. Dickson.
Heart's Content, N. F	.....	.....	29.72	754.9	31.0	— 0.6	100	E	.....	.....	3	.....	10	.....	.....	0.18	4.6	Overcast.....	E. Weedon.
*Kingston, Ontario	.....	.....	30.07	763.8	4	—15.6	87	Calm	0	0	.....	.....	10s	.....	.....	0	0	Cloudy.....	S. Woods, M. A.
*Montreal, Quebec	.....	.....	29.89	759.2	— 4	—20.0	65	W	24	10.7	.....	0	Haze	.....	.....	0	0	Fair	C. H. McLeod, C. E.
*Ottawa, Ontario	.....	.....	29.97	761.2	— 8	—22.2	88	W	6	2.7	.....	2cs	0	W	.....	0	0	Clear	J. B. Haney.
*Parry Sound, Ontario	.....	.....	30.14	765.5	—10	—23.3	82	W	6	2.7	.....	0	0	.....	.....	0	0	Clear.....	Rev. R. Mosley.
Port Dover, Ontario	.....	.....	30.08	764.0	14	—10.0	100	W	10	4.5	.....	.....	10n	.....	W	0.11	2.8	Light snow..	H. Morgan.
Port Hastings, N. S	.....	.....	29.40	746.7	16.1	— 8.8	.....	NW	15	6.7	.....	.....	.....	.....	.....	0.35	8.9	Snowing.....	Peter Grant.
Port Stanley, Ontario	.....	.....	30.11	764.8	12	—11.1	84	N	8	3.6	.....	.....	10n	.....	NW	0.07	1.8	Cloudy.....	M. Payne.
*Quebec, Quebec	.....	.....	29.71	754.6	— 2	—18.9	67	W	18	8.0	.....	0	0	.....	.....	0	0	Clear	Capt. Ashe, R. N.
*Rockliffe, Ontario	.....	.....	30.08	764.0	—12	—24.4	86	W	8	3.6	.....	0	0	.....	.....	0	0	Clear	
St. John, N. B	.....	.....	29.52	749.8	5	—15.0	100	W	20	8.9	.....	.....	7ks	.....	.....	0.080	2.02	Fine.....	G. Murdoch, C. E.
*Saugeen, Ontario	.....	.....	30.13	765.3	3	—16.1	54	Calm	0	0	.....	.....	8n	.....	.....	0.29	7.4	Cloudy.....	K. Stewart.
Stayner, Ontario	.....	.....	30.14	765.5	— 3	—19.4	90	Calm	0	0	.....	.....	10n	.....	.....	0.38	9.7	Light snow..	R. J. Cole.
Stratford, Ontario	28.69	728.7	30.13	765.3	— 1.3	—18.5	92	Calm	0	0	.....	2cs	2s	NW	.....	0.10	2.5	Fine.....	C. J. MacGregor, M. A.
*Sydney, C. B	.....	.....	29.05	737.9	20	— 6.7	91	SW	20	8.9	.....	8k	5n	.....	.....	0.65	16.5	Cloudy	T. C. Hill.
*Toronto, Ontario	.....	.....	30.10	764.5	2	—16.7	86	N	11	4.9	.....	.....	10ks	.....	W	0	0	Cloudy.....	Magnetic Observatory.
Woodstock, Ontario	.....	.....	30.06	763.5	10.1	—12.2	72	N	3	1.3	.....	1ck	3ks	.....	.....	0.10	2.5	Fair.....	J. Montgomery.
Sub-Series.																			
St. Johns, Newfoundland	.....	.....	28.78	731.0	33.0	0.6	100	SW	.....	.....	.....	.....	10n	.....	.....	0.30	7.6	Stormy.....	John Delany.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
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.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

Note.—The originals for Brockville, Charlottetown, Port Dover, Port Stanley, St. Johns, N. F., Stayner and those telegraphed, give the amount of cloudiness by the scale 0 to 4. The elevation of Granton is 1,015 feet, or 309.4 m.; Stratford, 1,182 feet, or 360.8 m.

UNITED STATES SERIES.

Furnished by the coöperation of Bvt. Brig. Gen. Albert J. Myer, Chief Signal Officer, U. S. Army.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Albany, N. Y.	.....	.....	29.96	761.0	6	—14.4	76	Calm	0	0	.....	0	5s	.....	.....	0.10	2.5	Fair	
Alpena, Mich.	.....	.....	30.18	766.6	4	—15.6	74	NW	6	2.7	.....	0	5s	.....	NW	p.23	5.8	Fair	
Atlantic City, N. J.	.....	.....	30.17	766.3	10	—12.2	79	W	8	3.6	.....	0	0	.....	.....	0	0	Clear	
Augusta, Ga.	.....	.....	30.43	772.9	21	— 6.1	85	NW	3	1.3	.....	0	0	.....	.....	0	0	Clear	
Baltimore, Md.	.....	.....	30.22	767.6	15	— 9.4	65	W	5	2.2	.....	2c	2s	.....	.....	0	0	Fair	
Barnegat, N. J.	.....	.....	30.14	765.5	9	—12.8	78	W	13	5.8	.....	0	0	.....	.....	0	0	Clear	
Bismarck, Dakota	28.30	718 8	30.09	764.3	10	—12.2	79	SW	2	0.9	.....	.....	Fog	.....	.....	0.14	3.6	Foggy	
Boston, Mass.	.....	.....	29.85	758.2	12	—11.1	70	W	9	4.0	.....	1cs	0	W	.....	0.04	1.0	Clear	
Breckenridge, Minn.	.....	.....	30.43	772.9	—21	—29.4	63	Calm	0	0	.....	2c	0	.....	.....	0.01	0.3	Clear	
Buffalo, N. Y.	.....	.....	30.01	762.2	16	— 8.9	83	W	25	11.2	.....	.....	10n	.....	.....	0.09	2.3	Light snow	
Burlington, Vt.	.....	.....	29.93	760.2	5	—15.0	62	NW	8	3.6	.....	0	2s	.....	.....	0.01	0.3	Fair	
Cairo, Ill.	.....	.....	30.45	773.4	4	—15.6	74	S	6	2.7	.....	2cs	Fog	W	.....	0	0	Fair	
Cape Hatteras, N. C.	.....	.....	30.25	768.3	23	— 5.0	78	NW	12	5.4	.....	0	0	.....	.....	0	0	Clear	
Cape Henry, Va.	.....	.....	30.28	769.1	20	— 6.7	70	NW	10	4.5	.....	0	0	.....	.....	0	0	Clear	
Cape Lookout, N. C.	.....	.....	30.37	771.4	21	— 6.1	54	NW	16	7.2	.....	0	0	.....	.....	0	0	Clear	
Cape May, N. J.	.....	.....	30.19	766.8	16	— 8.9	83	NW	32	14.3	.....	0	0	.....	.....	0	0	Clear	
Charleston, S. C.	.....	.....	30.42	772.7	27	— 2.8	54	N	6	2.7	.....	1c	0	W	.....	0	0	Clear	
Cheyenne, Wyoming	24.15	613.4	30.09	764.5	22	— 5.6	72	NW	24	10.7	.....	1c	0	.....	.....	0	0	Clear	
Chicago, Ill.	.....	.....	30.22	767.6	6	—14.4	76	SW	7	3.1	.....	2ck	5s	W	.....	0.01	0.3	Fair	
Cincinnati, Ohio	.....	.....	30.26	768.6	11	—11.7	79	SW	5	2.2	.....	0	2s	.....	.....	0	0	Fair	
Cleveland, Ohio	.....	.....	30.15	765.8	12	—11.1	80	SW	11	4.9	.....	.....	10n	.....	.....	0.06	1.5	Light snow	
Corsicana, Tex.	.....	.....	30.64	778.2	16	— 8.9	83	NW	6	2.7	.....	0	0	.....	.....	0	0	Clear	
Davenport, Iowa	.....	.....	30.28	769.1	4	—15.6	87	E	1	0.4	.....	.....	10n	.....	.....	0.35	8.9	Heavy snow	
Denison, Tex.	.....	.....	30.63	778.0	15	— 9.4	82	NW	1	0.4	.....	0	0	.....	.....	0	0	Clear	
Denver, Col.	24.90	634.0	30.18	766.6	19	— 7.2	69	S	12	5.4	.....	0	0	.....	.....	0	0	Clear	
Detroit, Mich.	.....	.....	30.10	764.5	10	—12.2	89	SW	5	2.2	.....	.....	10n	.....	.....	0.03	0.8	Light snow	
Dodge City, Kan.	27.71	703.8	30.26	768.6	10	—12.2	78	W	10	4.5	.....	0	0	.....	.....	Inap.	Inap.	Clear	
Dubuque, Iowa	.....	.....	30.30	769.6	— 2	—18.9	67	Calm	0	0	.....	.....	10s	.....	.....	0.10	2.5	Cloudy	
Duluth, Minn.	.....	.....	30.33	770.4	— 5	—20.6	63	NW	14	6.3	.....	0	0	.....	.....	0	0	Clear	
Eastport, Me.	.....	.....	29.83	759.0	6	—14.4	76	W	16	7.2	.....	5c	2s	.....	W	0.42	10.7	Fair	
Erie, Pa.	.....	.....	30.10	764.5	14	—10.0	91	S	12	5.4	.....	.....	10n	.....	.....	0.10	2.5	Light snow	
Escanaba, Mich.	.....	.....	30.20	767.1	1	—17.2	72	NE	3	1.3	.....	0	2s	.....	N	Inap.	Inap.	Clear	
Fort Gibson, Indian Ter.	.....	.....	30.54	776.7	0	—17.8	69	E	3	1.3	.....	0	0	.....	.....	0	0	Clear	
Ft. St. Michael, Alaska	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Fort Sill, Indian Ter.	29.26	743.2	30.46	773.7	28	— 2.2	48	W	12	5.4	.....	5cs	0	W	.....	0	0	Fair	
Fort Sully, Dakota	28.47	723.1	30.27	768.8	17	— 8.3	83	Calm	0	0	.....	.....	10s	.....	.....	Inap.	Inap.	Cloudy	
Florence, Arizona	28.74	730.0	30.33	770.4	43	6.1	.....	NE	.....	.....	.....	0	0	.....	.....	0	0	Clear	
Galveston, Tex.	.....	.....	30.51	774.9	28	— 2.2	71	N	22	9.8	.....	0	0	.....	.....	0	0	Clear	
Grand Haven, Mich.	.....	.....	30.11	764.8	17	— 8.3	83	NE	9	4.0	.....	.....	10s	.....	NW	0.06	1.5	Cloudy	
Indianapolis, Ind.	.....	.....	30.27	768.8	9	—12.8	78	SW	8	3.6	.....	.....	10n	.....	.....	Inap.	Inap	Light snow	
Indianola, Tex.	.....	.....	30.54	775.7	33	0.6	69	N	24	10.7	.....	0	0	.....	.....	0	0	Clear	
Jacksonville, Fla.	.....	.....	30.41	772.4	34	1.1	69	NW	2	0.9	.....	0	0	.....	.....	0	0	Clear	
Keokuk, Iowa	.....	.....	.....	.....	12	—11.1	80	SW	8	3.6	.....	.....	10s	.....	SW	0	0	Cloudy	
Key West, Fla.	.....	.....	30.36	771.1	50	10.0	77	NE	20	8.9	.....	0	0	.....	.....	0	0	Clear	
Kittyhawk, N. C.	.....	.....	30.32	770.1	19	— 7.2	69	NW	8	3.6	.....	0	0	.....	.....	0	0	Clear	
Knoxville, Tenn.	.....	.....	30.48	774.2	—10	—23.3	54	Calm	0	0	.....	.....	Fog	.....	.....	0	0	Dense fog	
La Crosse, Wis.	.....	.....	30.32	770.1	— 6	—21.1	61	N	1	0.4	.....	0	0	.....	.....	0.03	0.8	Clear	
Leavenworth, Kan.	.....	.....	30.31	769.9	17	— 8.3	83	W	6	2.7	.....	.....	10s	.....	.....	0	0	Cloudy	
Louisville, Ky.	.....	.....	30.36	771.1	10	—12.2	58	S	9	4.0	.....	.....	10s	.....	.....	0	0	Cloudy	
Lynchburg, Va.	.....	.....	30.37	771.4	4	—15.6	87	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Malone, N. Y.	.....	.....	29.93	760.2	2	—16.7	72	W	7	3.1	.....	0	0	.....	.....	0.01	0.3	Clear	
Marquette, Mich.	.....	.....	30.17	766.3	9	—12.8	78	W	16	7.2	.....	.....	10s	.....	.....	0	0	Cloudy	
Memphis, Tenn.	.....	.....	30.52	775.2	8	—13.3	78	Calm	0	0	.....	.....	Fog	.....	.....	0	0	Foggy	
Milwaukee, Wis.	.....	.....	30.24	768.1	— 1	—18.3	84	NW	8	3.6	.....	0	0	.....	.....	0.02	0.5	Clear	
Mobile, Ala.	.....	.....	30.49	774.4	31	— 0.6	89	N	2	0.9	.....	0	Fog	.....	N	0	0	Clear	
Montgomery, Ala.	.....	.....	30.52	775.2	24	— 4.4	80	N	3	1.3	.....	0	0	.....	.....	0	0	Clear	
Morgantown, W. Va.	29.11	739.4	30.27	768.8	11	—11.7	79	SW	12	5.4	.....	.....	10s	.....	SW	0.01	0.3	Cloudy	
Mt. Washington, N. H.	22.78	578.6	29.14	740.1	—22	—30.0	100	NW	100	44.7	.....	.....	Fog	.....	.....	0	0	Foggy	
Nashville, Tenn.	.....	.....	30.48	774.2	— 5	—20.6	82	Calm	0	0	.....	2k	Fog	.....	.....	0	0	Fair	
New Haven, Conn.	.....	.....	30.02	762.5	20	— 6.7	71	W	5	2.2	.....	Haz	0	.....	.....	0	0	Clear	
New London, Conn.	.....	.....	29.99	761.7	12	—11.1	80	W	6	2.7	.....	0	0	.....	.....	0.01	0.3	Clear	
New Orleans, La.	.....	.....	30.47	773.9	37	2.8	71	E	5	2.2	.....	1cs	Sm'c	W	E	0	0	Clear	
Newport, R. I.	.....	.....	29.97	761.2	15	— 9.4	67	W	20	8.9	.....	0	0	.....	.....	Inap.	Inap.	Clear	
New York, N. Y.	.....	.....	30.08	764.0	12	—11.1	61	W	13	5 8	.....	0	0	.....	.....	0	0	Clear	
Norfolk, Va.	.....	.....	30.31	769.9	19	— 7.2	69	W	6	2.7	.....	0	0	.....	.....	0	0	Clear	
North Platte, Neb.	27.28	692.9	30.09	764.3	12	—11.1	79	W	16	7.2	.....	0	0	.....	.....	0	0	Clear	
Omaha, Neb.	29.06	738.1	30.20	767.1	26	— 3.3	88	NW	12	5.4	.....	.....	10s	.....	NW	0	0	Cloudy	
Oswego, N. Y.	.....	.....	30.01	762.2	14	—10.0	92	NW	8	3.6	.....	.....	10n	.....	.....	In ap.	Inap.	Light snow	
Penola, Florida	.....	.....	30.34	770.6	—15	—26.1	71	S	5	2.2	.....	8k	0	N	.....	0.04	1.0	Fair	
Philadelphia, Pa.	.....	.....	30.17	766.3	10	—12.2	79	NW	4	1.8	.....	Haz	Fog	.....	.....	0	0	Fair	
Pike's Peak, Col.	17.79	451.8	30.00	762.0	8	—13.3	55	N	20	8.9	.....	0	0	.....	.....	0.17	4.3	Clear	
Pittsburgh, Pa.	.....	.....	30.21	767.3	11	—11.7	90	W	9	4.0	.....	.....	10s	.....	W	0.01	0.3	Cloudy	
Port Huron, Mich.	.....	.....	30.07	763.8	13	—10.6	100	SW	2	0.9	.....	.....	10n	.....	.....	0.04	1.0	Light snow	
Portland, Me.	.....	.....	29.72	754.9	9	—12.8	89	W	12	5.4	.....	0	0	.....	.....	0.23	5.8	Clear	
Portland, Oregon	.....	.....	30.27	768.8	39	3.9	90	S	2	0.9	.....	.....	10s	.....	.....	0	0	Cloudy	
Punta Rassa, Fla.	.....	.....	30.42	772.7	43.0	6.1	65	N	12	5.4	.....	0	0	.....	.....	0	0	Clear	
Rochester, N. Y.	.....	.....	29.99	761.7	15	— 9.4	82	NW	8	3.6	.....	.....	10n	.....	.....	0.17	4.3	Light snow	
Salt Lake City, Utah	26.08	662.4	30.41	772.4	16	— 8.9	83	SE	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Sandy Hook, N. J.	.....	.....	30.02	762.5	15	— 9.4	64	NW	37	16.5	.....	0	Haz	.....	.....	Inap.	Inap.	Clear	
San Diego, Cal.	.....	.....	30.21	767.3	50	10.0	42	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
San Francisco, Cal.	.....	.....	30.27	768.8	50	10.0	65	NW	10	4.5	.....	0	0	.....	.....	0	0	Clear	
Santa Fé, N. M.	23.48	596.4	30.02	762.5	15	— 9.4	64	N	9	4.0	.....	0	0	.....	.....	0	0	Clear	
Savannah, Ga.	.....	.....	30.43	772.9	28	— 2.2	67	N	6	2.7	.....	1c	0	W	.....	0	0	Clear	
Shreveport, La.	.....	.....	30.61	777.5	23	— 5.0	86	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Smithville, N. C.	.....	.....	30.38	771.6	19	— 7.2	67	N	6	2.7	.....	0	0	.....	.....	0	0	Clear	
Springfield, Mass.	.....	.....	29.90	761.0	17	— 8.3	66	Calm	0	0	.....	0	0	.....	.....	0.01	0.3	Clear	
St. Louis, Mo.	.....	.....	30.30	769.6	17	— 8.3	83	SW	4	1.8	.....	.....	10s	.....	.....	0	0	Cloudy	
St. Marks, Fla.	.....	.....	30.46	773.7	28	— 2.2	89	N	2	0.9	.....	0	0	.....	.....	0	0	Clear	
St. Paul, Minn.	.....	.....	30.34	770.6	—10	—23.3	77	SW	1	0.4	.....	0	0	.....	.....	0.03	0.8	Clear	
St. Paul's Island, Alaska	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Thatcher's Island, Mass.	.....	.....	29.85	758.2	12	—11.1	42	W	16	7.2	.....	1k	0	W	.....	0.03	0.8	Clear	
Toledo, Ohio	.....	.....	30.14	765.5	12	—11.1	80	SW	12	5.4	.....	.....	10n	.....	SW	0.07	1.8	Light snow	
Tucson, Arizona	27.79	705.8	30.34	770.6	23	— 5.0	.....	SE	.....	.....	.....	1c	0	N	.....	0	0	Clear	
Tybee Island, Ga.	.....	.....	30.41	772.4	27	— 2.8	77	N	10	4.5	.....	2c	0	W	.....	0	0	Clear	
Vicksburg, Miss.	.....	.....	30.50	776.2	23	— 5.0	86	Calm	0	0	.....	0	Sm'c	.....	N	0	0	Clear	
Virginia City, M. T.	24 49	622.0	29.97	761.2	17	— 8.3	83	Calm	0	0	.....	8c	0	NW	.....	0	0	Cloudy	
Washington, D. C.	.....	.....	30.26	768.6	— 1	—18.3	72	SW	4	1.8	.....	5cs	Sm'c	W	.....	0	0	Fair	
Wilmington, N. C.	.....	.....	30.38	771.6	18	— 7.8	68	N	10	4.5	.....	0	0	.....	.....	0	0	Clear	

UNITED STATES SERIES.—Continued.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Wood's Holl, Mass.	.....	.....	29.93	760.2	18	— 7.8	68	NW	28	12.5	.....	0	0	.....	.....	0.16	4.1	Clear	
Yankton, Dakota	28.92	734.6	30.30	769.6	21	— 6.1	85	N	15	6.7	.....	.....	10s	.....	.....	0	0	Cloudy	
Yuma, Arizona	.....	.....	30.34	770.6	56	13.3	.....	N	.....	.....	.....	0	0	.....	.....	0	0	Clear	
Sub-Series.																			
Kingston, Jamaica, W. I.	.....	.....	30.27	768.8	74	23.3	81	N	5	2.2	.....	5c	2s	.....	N	0	0	.....	James Gall.
Navassa, W. I.	.....	.....	.....	.....	77	25.0	.....	NE	.....	2	.....	.....	.....	.....	.....	.....	.....	Raining	F. M. Everett.
Clifton, Ja., W. I.	27.27	692.6	30.09	764.3	64	17.8	94	E	2.0	0.9	.....	5c	0	E	.....	0	0	Fine	C. Partridge.
Paramaribo, D. Guiana, S. A.	.....	.....	30.03	762.7	82	27.8	83	E	.....	.....	3	3c	5k	E	.....	0	0	.....	C. J. Hering.
Batavia, Dutch Guiana, S. A.	30.00	762.0	.....	.....	77.4	25.2	.....	E	.....	.....	.....	.....	.....	.....	.....	0	0	Cloudy	Dr. H. Groot.
Medellin, Colombia, S. A.	25.25	641 3	.....	.....	62 8	17.1	89	Calm	.....	.....	0	0	8ks	.....	.....	0.13	3.3	Cloudy	Thomas Herran.
York Factory, B. A.	.....	.....	30.26	768.6	—30.0	—34.4	.....	SW	1	0.4	.....	2c	2s	S	.....	0	0	Fair	J. Fortescue, W. Wood.
Honolulu, Oahu, H. I.	.....	.....	30.04	763.0	74	23.3	95	Calm	.....	.....	0	.....	.....	.....	.....	0	0	Hazy	Daniel Smith.
Makawao, Maui, H. I.	.....	.....	29.93	760.2	62	16.7	77	Calm	.....	.....	0	0	3k	.....	.....	0	0	.....	F. L. Clarke.

Marine Series.	True course towards.	Hourly rate in knots.	State of ocean.	Direction of swell from—
Schooner Addie Fuller, Tarpaulin Cove.	.....	.....	.....	.....

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Schooner Addie Fuller, Tarpaulin Cove.	.....	.....	29.86	758.4	19	— 7.2	84	W	25	11.2	.....	0	0	.....	.....	.....	.....	Clear	Capt. James Jorgensen.

Note.—The originals give the cloudiness by the scale 0 to 4, except York Factory, Medellin and Paramaribo. The elevation of the barometer at Bismarck is 1,677 feet, or 511.1 meters; Cheyenne, 6,057.3 ft., or 1,846.2 m.; Clifton, about 2,892 ft., or 881.5 m.; Denver, 5,135 ft., or 1,565.2 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Florence, 1,550 (?) ft., or 472.5 (?) m.; Makawao, 2,205 ft., or 672.1 m.; Morgantown, 1,027.9 ft., or 313.3 m.; Medellin, 4,876 ft., or 1,486.2 m.; Mt. Washington, 6,285 ft., or 1,915.6 m.; North Platte, 2,846 ft., or 867.4 m.; Omaha, 1,054.6 ft., or 321.4 m.; Pike's Peak, 14,150.7 ft., or 4,313.1 m.; Salt Lake City, 4,3[illegible]2 2 ft., or 1,329.6 m.; Santa Fe, 6,862.2 (?) ft., or 2,091.6 (?) m.; Tucson, 2,513 (?) ft., or 772.1 (?) m.; Virginia City, 5,480 (?) ft., or 1,670.3 (?) m.; Yankton, 1,278 ft., or 389.5 m. The following constants are added in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Denver, 5.22 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fe, 6.54 in.; Tucson, 2.59 in.; Virginia City, 5.48 in. The elevation of Batavia is about 6 feet; the barometric readings need the addition of 0.2 mm. or 0.01 in. for reduction to sea-level.

UNITED STATES NAVAL SERIES.

By authority of the SECRETARY OF THE NAVY.

Furnished by the coöperation of the Navy Department, through Commodore Daniel Ammen, U. S. N., Chief of Bureau of Navigation.

STATIONS AND VESSELS.	TRUE COURSE TOWARDS.	HOURLY RATE IN KNOTS.	*BAROMETER AS REPORTED.		TEMPERATURE OF THE AIR.		RELATIVE HUMIDITY.	WIND.				CLOUDS.				RAIN-FALL OR MELTED SNOW IN THE PAST 24 HOURS.		STATE OF OCEAN.	DIRECTION OF SWELL FROM—	WEATHER.	OBSERVER.
								Direction.	Velocity		Force.	Amount.		Direction.							
												Up'er	Low'r	Up'er	Low'r						
			Inches.	Millimeters.	Fahrenheit.	Centigrade.	Per cent.	From—	Miles per hour.	Meters per second.	0—10.	0—10.	0—10.	From—	From—	Inches.	Millimeters.				
Naval Academy, Naval Hospital, Santee, Annapolis, Md.																					
Monongahela, Baltim're, Md.																					
Wabash, Boston, Mass.																					
Michigan, Erie, Pa.																					
Hartford, Hampton Rds., Va.																					
St. Louis, Le Draue Island, Pa.																					
Navy Yard, Mare Island, Cal.																					
Rio Bravo, Matamoras, Mex.																					
Alarm, New York, N. Y.																					
Colorado, New York, N. Y.																					
Franklin, New York, N. Y.																					
Intrepid, New York, N. Y.																					
Minnesota, New York, N. Y.																					
Swatara, New York, N. Y.																					
Canonicus, New Orleans, La.																					
Ossipee, New Orleans, La.																					
Essex, Norfolk, Va.																					
Navy Yard, Norfolk, Va.																					
Omaha, Panama																					
Pensacola, Panama																					
Navy Yard, Pensacola, Fla.																					
Plymouth, Pensacola, Fla.																					
Navy Yard, Portsmouth, NH.																					
Adams, Port Royal, S. C.																					
Ajax, Port Royal, S. C.																					
Catskill, Port Royal, S. C.																					
Dictator, Port Royal, S. C.																					
Huron, Port Royal, S. C.																					
Lehigh, Port Royal, S. C.																					
Manhattan, Port Royal, S.C.																					
New Hampshire, Port R., SC.																					
Navy Yard, Wash'gton, D. C.																					
Tallapoosa, Wash'gton, D. C.																					
Wyoming, Washington, D. C.																					

* It is not known that the barometer is corrected for temperature, instrumental error or elevation.

COLLATED AT THE OFFICE OF THE CHIEF SIGNAL OFFICER OF THE ARMY, WASHINGTON, D. C.

The records which appear in this Bulletin are copied from the regular exchanges of this office, made in each instance in compliance with an especial request, and are published for the uses of the coöperating observers. The barometric readings in the first two columns are reduced to freezing and their respective standards; those in the second two also to mean sea-level. The "weather" is generally published as given.

When the distinction between the upper and lower strata of clouds is not reported, the *kinds* or *types*, viz: cirrus, cumulus, stratus, nimbus, scud, fracto, pallio, haze, fog and smoke, as indicated, respectively, by the letters c, k, s, n, d, f, p, hz., fg. and sm'e, are generally published with the amount in the lower-cloud column. The distinction between the upper and lower strata is carefully made in the United States Series and a portion of the Canadian Series, and the types are indicated by the above letters or their combinations in the proper column.

Albert J. Myer

Brig. Gen. (Bvt. Assgd.,) Chief Signal Officer, U. S. A.

BULLETIN

OF

INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON JANUARY 4, 1877.

7:35 A. M. WASHINGTON mean time.

0:7 A. M. MEXICO mean time.
7:7 A. M. SAN JOSE mean time.
0:6 P. M. LISBON mean time.
0:28 P. M. MADRID mean time.
0:43 P. M. GREENWICH mean time.
0:53 P. M. PARIS mean time.
1:1 P. M. BRUSSELS mean time.
1:4 P. M. UTRECHT mean time.
1:13 P. M. BERNE mean time.
1:26 P. M. CHRISTIANIA mean time.
1:33 P. M. COPENHAGEN mean time.
1:33 P. M. ROME mean time.
1:37 P. M. BERLIN mean time.
1:49 P. M. VIENNA mean time.
1:55 P. M. STOCKHOLM mean time.
2:18 P. M. ATHENS mean time.
2:39 P. M. CONSTANTINOPLE mean time.
2:44 P. M. ST. PETERSBURG mean time.

ALGERIAN SERIES.

Furnished by the coöperation of General d'Eudeville, Commandant Supérieur du Génie in Algeria.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Nemours			29.95	760.6	63.5	17.5	64	WSW			3		6			0	0	Fair	Charnot.
Algiers			29.82	757.4	66.9	19.4		SSW			3		7			0	0	Cloudy	Peter.
La Calle			29.92	760.0	75.9	24.4	29	W			3		3			Inap.	Inap.	Fair	Fleury.
Tunis			30.04	763.1	59 0	15.0		W			2		1			0	0	Clear	Jacques.
Sfax																			
Biida			29.94	760.5	56.8	13.8	54	SW			2		6			0	0	Fair	Millot.
Tebessa			30.06	763.4	53.6	12.0		SW			3		3			0	0	Fair	Bourgeois.
Geriville			30.02	762.5	60.1	15.6	10	S			4		3			0	0	Fair	Lemailliot.
Laghouat			29.95	760.7	58.1	14.5	24	W			1		6			0	0	Fair	Guyot.
Biskra			30.10	764.5	61.3	16.3	42	E			2		10			0	0	Hidden	Kuntz.

NOTE.—In the originals the distinction between the amount of upper and lower clouds is apparently not made. The weather is published as given. The rain-fall is measured at 7 a. m., local time.

AUSTRIAN SERIES.

Furnished by the cooperation of Professor Ferdinand Osnaghi, Director of the Imperial and Royal Central Meteorological Institute at Vienna.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Agram			29.92	760.0	54.5	12.5	67	SW			4		10			0	0		Prof. Ivan Stosir.
Cracow, I. R. Observatory			29.76	755.8	39.9	4.4	84	NE			1		10			0	0		Dr. Wiersbiaki.
Eperies			29.89	759.2	37.8	3.2	92	SE			2		10			0	0		Julius Mikolik.
Gratz	28.54	725.0	29.81	757.2	45.3	7.4	67	NW			5		10			0	0		Andreas Rospini.
Hermannstadt	28.58	725.8	30.03	762.7	42.8	6.0	84	SSE			1		4			0	0		Prof. Reissenberger.
Kremsmünster	28.30	718.7	29.89	754.0	31.6	— 0.2	96	NE			1		10			0	0		Prof. C. Wagner.
Lemberg			29.80	757.0	47.8	8.8	78	SW			1		4			0	0		Dr. T. Stanecki.
Nyiregyhaza																			Habzsuda Daniel.
Pola			30.05	763.2	52.3	11.3	91	W			1		10s			0	0	Foggy	I.R. Hydrographic Office.
Szegedin			29.97	761.3	46.4	8.0	78	S			1		6			0	0		Karl Stancel.
Trieste			30.08	764.1	47.1	8.4	99	Calm			0		10			0.130	3.3	Rain and fog	Prof. V. Faroli.
Vienna			29.70	754.4	36.5	2.5	96	Calm			0		10			0	0	Foggy	I. R. Central Met. Obs'y.

NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 7 p. m., local time. The elevation of Gratz is 343.5 meters, or 1,126.9 feet; Hermannstadt, 407.8 meters, or 1,337.9 feet; Kremsmünster, 383.6 meters, or 1,258.5 feet.

BELGIAN SERIES.

Furnished by the cooperation of J. C. Houzeau, Director of the Royal Observatory at Brussels.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Arlon			29.49	749.1	47.1	8.4	86	SW			2		10			0.48	12.2		
Brussels			29.33	745.0	50.2	10.1	89	S			4		10		SW	0.046	1.17	Raining	Royal Observatory.
Furnes			29.25	742.9	50.2	10.1	95	SSW			3		8			0.020	0.5		
Maeseyck			29.39	746.5	51.6	10.9	80	S			3		10			0.098	2.5		

NOTE.—In the originals, the weather is occasionally given in general notes.

BRITISH SERIES

Furnished by the coöperation of Robert H. Scott, Esq., Director of the Meteorological Office, London, Alexander Buchan, Secretary of the Scottish Meteorological Society, Edinburgh, and the respective Observers.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Aberdeen			29.21	741.9	35.6	2.0		ENE	40	17.9			10			0.230	5.84	Raining	William Boswell.
Ardrossan			29.09	738.9	36	2.2		ENE			5		9					Sleeting	William McNeil.
Armagh, Observatory			28.95	735.3	40.0	4.4		NE	14	6.3			10					Raining	S. Call, for Dr. Robinson
Birr Castle, (Parsonstown)			28.85	732.8	50.8	10.4		SE			1		7					*D. clouds	J. Dreyer.
Bradford			29.07	738.4	37.3	2.9		N			0		10			1.12	28.4	Foggy	J. McLandsborough.
Bridgetown, (Barbados)			29.95	760.7	88.0	28.3		NE			3		4					Raining	Sergt. J. F. Halanen, A.
Cambridge, Observatory			29.15	740.4	50.1	10.1		S			2		10					Overcast	H. Todd. [H.C.
Cardington			29.14	740.1	51.0	10.6		SW			1		8					Overcast	John McLaren.
Carlisle																			T. Pell, for J. Cartmell.
Chatham, School M. E.			29.21	741.9	50.0	10.0		SW			2		10					Overcast	Maj. C. N. Martin, R.E.
Dartmoor	27.68	703.1	29.17	740.9	44.4	6.9		SW			5		9					Showery	R. E. Power.
Davos Platz, (Switzerland)	24.65	d26.1			43.0	6.1	57	S			1		4			0	0	*D. clouds	Francis Redford, M. A.
Donaghadee			28.97	735.8	48	6.1		E			6		10					Overcast	J. Mac Gowan.
Dover			29.20	741.7	50	10.0		SW			4		8					Drizzling	J. Costello.
Eccles, (near Manchester)			29.05	737.9	51.5	10.8		S	2..	1.0								*D. clouds	Thomas Mackereth.
Falmouth, Observatory			29.07	738.4	52.0	11.1		SW			5		4					*D. clouds	The Staff.
Fort Napier, (Natal)	27.53	700.8	29.83	757.7	74.2	23.4		SE			1		6					*D. clouds	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.95	760.7	85.0	29.4		N			0		4					*D. clouds	
Galway, Queen's College			29.04	737.6	42	5.6		SE			4		10					Raining	Prof. A. H. Curtis.
Gibraltar, (Mediterranean)			29.92	760.0	62.3	16.8		W			3		6			Dimk	Dimk	*D. clouds	Corpl. C. Aitken, A. H. C.
Glasgow, Observatory			29.11	739.4	35.6	2.0		NE			3		10					Threatenin	Lewis Stuart.
Great Yarmouth			29.16	740.7	49	9.4		SW			3		7					*D. clouds	G. T. Watson.
Greenwich, Royal Obs'y			29.17	740.9	50.7	10.4		SSW			1		10			Dark	Dark	Overcast	The Staff, for G. B. Airy.
Guernsey			29.19	741.4	52	11.1		SSW			3		5					Showery	Dr. S. F. Hoskins.
Helston			29.09	738.9	54	12.2		SW			6		8k			0.19	4.8	Fair	M. P. Moyle.
Holyhead			28.95	735.3	48	8.9		S			3		10					Raining	John Tibton.
Kew, Observatory			29.17	740.9	51.0	10.6		SSW	15	6.7			10					Threatenin	The Staff.
Kingstown			28.91	734.3	48	8.9		SSE			3		8					*D. clouds	George Mitchell.
Leicester Museum			29.09	738.9	51.1	10.6		SW			4		8					*D. clouds	Wm. J. Harrison, F.G.S.
Malta, (Mediterranean)			30.18	766.6	62.6	17.0		SE			2		4k					*D. clouds	Corp'l. P. Bravis, A.H.C.
Nairn			29.24	742.7	34	1.1		ENE			2		10					Overcast	W. D. Penny.
Nassau, (Bahamas)			30.13	765.3	64.9	18 3		NW			3		4					*D. clouds	Surg. Maj. Henry.
Nottingham, Observatory			29.09	738.9	51.4	10.8		SSW			4		5k.c		SSW	0.318	8.07	*D. clouds	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			29.06	738.1	50.6	10.3		N			3-4		9					Misty	Rev. Stephen Whitty.
Oxford, Radcliffe Obs'y			29.12	739.6	52	11.1		N			2		7					*D. clouds	J. Lucas.
Plymouth			29.09	738.9	51.8	11.0		SSW			5		10					Raining	John Merrifield.
Roche's Point			28.87	733.3	50	10.0		SSW			5		8					Cloudy	W. Kennedy.
Saint Ann's Head			28.96	735.6	50	10.0		SSW			6		5					Squally	John C. Walker.
Saint Helier, (Jersey)			29.20	741.7	52.0	11.1		N			4		5					½ clouded	A. P. Amy.
Sandwick Manse, (Orkneys)			29.36	745.7	33.5	0.8		E	18	8.0			5					*D. clouds	Rev. C. Clouston, LL. D.
Scarborough																			F. Shaw.
Scutari Cemetery, (Turkey)			30.16	766.1	56.0	13.3		SSE			1		7					*D. clouds	Sergt. W. H. Lyne.
Sheffield			29.08	738.6	39.3	4.1		S			1		10			0.040	1.02	Foggy	W. F. Cooper.
Silloth Rectory			29.00	736.6	38.0	3.3	87	SE			3		8			0.850	21.59	*D. clouds	Francis Abbott, F.R.A.S.
Stonyhurst, Observatory			29.07	738.4	38.3	3.5		NE			1		10k					Overcast	Rev. Francis Redford
Stornoway, Lewis C., (Hebr.)			29.26	743.2	36	2.2		E			7		10					Snowing	Rev. S. J. Perry.
Strathfield Turgiss			29.16	740.7	51.4	10.8		S			1		5					Blue sky	John Smith.
Thurso			29.32	744.7	36	2.2		ENE			3		7					*D. clouds	Rev. Charles H. Griffith.
Truro, Royal Institution			29.12	739.6	54	12.2		SW			6		8					Gloomy	John Trotter.
Valencia, Observatory			28.83	732.3	50.4	10.2		SW	21	9.4			10					Showery	W. Newcombe.
Sub-Series.																			The Staff.
Calf of Man, (Isle of Man)					43	6.1		SE			8		10			2.0	50.8		Henry Mercer.
Cape Good Hope, Obs'y			30.08	764.0	79.0	26.1	48	W	11	4.9		6	6						The Staff, for E. J. Stone.
Hobart Town, (Tasmania)			29.54	750.3	71.0	21.7	88	S			2		8k			0.02	0.5		Francis Abbott, F.R.A.S.
Leith, Restalrig Park			29.14	740.1	38.2	3.4		E			6		10n			0.32	8.1	Overcast	Andrew Gibb.
Mauritius, Observatory			29.92	760.0	84.0	28.9	60	ENE	17.9	8.0		0	6		E	0.03	0.8	Squally	C. Meldrum.
Melbourne, Observatory			29.61	752.1	71.7	22.1	55	ESE	3	1.3		0	0			0	0	Fine	R. L. J. Emery.
Monach L't-house, (Hebrides)			29.18	741.2	37	2 8		E			7		10			0	0		J. Youngclause.
North Unst, (Shetland Is.)			29.48	748.8	36	2.2		SE			6	3	6	SE		Hail	Rain		Robert Burnet.

NOTE.—Generally, the originals do not give the relative humidity, rain-fall, or distinction between upper and lower clouds. The originals give the wind direction to 32 points and weather by the Beaufort notation. The originals give the barometer for Aberdeen, Cardington, Galway, Oxford, St. Helier, Sandwick, Scarborough, Stonyhurst, Leith, Monach and North Unst as read off and the cloudiness for Stornoway by the scale 0 to 4. The wind-force is given by the scale 0 to 12 in the official series; 0 to 6 in the sub-series; except in lbs. per square foot for Greenwich and Hobart Town. The rain-fall is measured at Aberdeen at 10 a. m.; Bradford, 9 a. m.; Hobart Town, 7:30 a. m.; Nottingham, 6 p. m.; Mauritius, 9 a. m., local time. The elevation of Dartmoor is 1,400 feet, or 426.7 meters; Davos Platz, 5,105? feet, or 1,556.0? meters; Fort Napier, 2,200 feet, or 670.6 meters. *Detached clouds

By authority of the Minister of Foreign Affairs.

COSTA RICA SERIES.

Furnished by the coöperation of Senor Federico Maison, Director of the Central Office of Statistics and Meteorology.

San José																			

DANISH SERIES.

Furnished by the coöperation of Captain N. Hoffmeyer, Director of the Royal Danish Meteorological Institute at Copenhagen.

Copenhagen			29.45	748.0	33.4	0.8	94	SE			4		10						
Fanöe			29.28	743.6	36.9	2.7	100	S			4		10					Raining	
Godthaab, (Greenland)			29.71	754.6	19.0	— 7.2	69	ENE			6		2						
Stykkisholm, (Iceland)			29.70	754.4	19.9	— 6.7	95	E			4		0						
Thorshavn, (Faröe)			29.62	752.3	27.5	— 2.5	68	NE			2		1						
Vestervig			29.25	743.0	31.3	— 0.4	100	E			6		10					Snowing	

NOTE.—The originals give the wind-force by the scale 0 to 6; occasionally, weather by Vienna symbols; no distinction between the amount of upper and lower clouds.

FRENCH SERIES.

Furnished by the coöperation of His Excellency, U. J. Le Verrier, Director of the Paris Observatory, and the respective Observers.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Alençon			29.32	744.7	50.0	10	94	SW			3		10			0.110	2.80	Covered	Normal School.
Amiens			29.30	744.1	50.4	10.2	97	SW			3		10			0.118	3.0	Covered	Normal School.
Avignon			29.62	752.3	58.3	14.6	55	SE			8		8		S	0	0	Very cloudy	Normal School.
Bar-sur-Seine			29.43	747.5	54.3	12.4	61	SSW			2		10		SW	0	0	Covered	C. Saillard.
Beaumette, (near Angers)			29.31	744.4	50.4	10.2	97	SW	2.7	1.2					SW	0.236	6.0		Beaumette Observatory.
Beauvais			29.32	744.8	50.5	10.3	86	S			3		10		S	0.12	3.	Covered	Normal School.
Besançon			29.57	751.1	45.9	7.7	72	N			2		8		SW	0	0	Very cloudy	Normal School.
Bourg en Bresse			29.69	754.1	52.7	11.5	85	SE			2		5n		N	0	0	Cloudy	Normal School.
Bourges			29.39	746.4	50.9	10.5	84	S			2		10		S	0.106	2.7	Covered	Normal School.
Brest			29.13	740.0	53.4	11.9	86	SW			5		8		SW	0.138	3.50	Squally	Naval Observatory.
Carcassonne			29.37	746.1	56.1	13.4	77	E			2		2		W	0	0	Slightly cl'dy	Normal School.
Caen																			Normal School.
Chartres			29.33	744.9	50.7	10.4	93	SSW			4		9		E	0.339	8.6		Normal School.
Châlons-sur-Marne			29.43	747.5	50.7	10.4	82	S			2		10		NE	0.079	2.0	Raining	Normal School.
Clermont			29.38	746.2	53.8	12.1	56	S			6		8		SSW	0	0	Very cloudy	Puy de Dome Obs'y.
Commercy			29.44	747.7	50.9	10.5	71	SSW			4		8kn		E	0	0	Very cloudy	Normal School.
Commune de Grénasque*			29.76	755.9	54.1	12.3	61	SE			8		10		SE	0	0		M. Kina.
Grenoble			29.61	752.0	58.3	14.6	53	SSW			2		2kn		E	0	0	Slightly cl'dy	Normal School.
La Roche-sur-Yon			29.35	745.6	50.7	10.4	95	SW			2		10			0.504	12.8	Covered	Normal School.
Le Mans			29.41	747.1	48.9	9.4	95	S			3		10			0.28	7.	Covered	Normal School.
Le Saulnier			29.57	751.1	52.0	11.1	54	S			2		10			0	0	Covered	Normal School.
Lorient			29.28	743.8	55.8	13.2	66	SW			4		8		SW	0.063	1.6	Very cloudy	Naval Observatory.
Mâcon			29.70	754.3	56.3	13.5	93	S			2		10			0	0	Covered	Normal School.
Metz			29.58	751.4	49.3	9.6	94	S			3		10			0	0		M. Schuster.
Mirecourt			29.55	750.6	46.0	7.8	77	S			2		5		W	0	0	Cloudy	Normal School.
Nismes			29.60	751.8	57.2	14	78	SE			6		5		NW	0.335	8.5	Cloudy	Normal School.
Orleans			29.35	745.6	51.1	10.6	84	SSW			2		10			0	0	Covered	Normal School.
Paris, Observatory			29.34	745.3	50.7	10.4	90	S			2		10n		SW	0.097	2.47	Raining	National Observatory.
Parthenay																			Normal School.
Privas			29.63	750.1	57.6	14.2		S			8		10		S	0	0	Covered	Normal School.
Rochefort, Observatory			29.37	746.1	52.2	11.2	98	SW			3		10			0.315	8.0	Covered	Naval Observatory.
Rouen			29.33	744.9	52.2	11.2	90	SW			2		10			0.026	0.7	Covered	Normal School.
Saint Lo																			Normal School.
Tarbes	8.31	719.1	29.37	746.0	54.5	12.5	90	SE			2		0			0	0	Clear	Normal School.
Villefranche			29.62	749.8	55.4	13	84	N			8		2		W	0	0	Slightly cl'dy	Normal School.
Sub-Series.																			
Fort de France, Martinique			29.93	760.1	75.2	24													L'Abbé Marchési.
Marseilles			29.66	753.4	57.2	14.0	60	SE			6		10			0.480	12.2	Rainy	Marseilles Observatory.
Mont-Louis	24.32	617.7	29.63	752.7	38.3	3.5	71	SE	5.6	2.50			10		S	0.252	6.4		—. Falguère.
Montsouris, Paris			29.34	745.1	51.3	10.7	86	S			2		10		SSW	0.276	7.0	Sprinkling	Montsouris Observatory
Perpignan			29.45	748.0	59.4	15.2	78	SE	18.6	8.30			10		S	0.012	0.3		Dr. Fines.
Pic du Midi, (Summit,) H. P.																			M. Baylac.
Pic du Midi, (Plantade,) H. P.	22.96	567.8			26.6	— 3.0		NW			1		10			0.484	12.3	Snowy	General de Nansouty.
Saint Maur, (near Paris)			29.35	745.4	51.1	10.7	89	S			2		10			0.020	0.5	Covered	E. Renou.
Toulouse			29.38	746.3	57.9	14.4	72	SSE			3		10			0.047	1.2	Thunder-storm	Toulouse Observatory.
Tours			29.37	746.1	51.8	11.0	90	SSW			2		10		WSW	0.228	5.8		C. Marquet.
Versailles, (near Paris)			29.34	745.3	51.8	11.0	90	SW			2		10			0.232	5.90	Covered	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai)			30.59	777.0	32.9	0.5	94	NNE	2.9	1.3			0			0	0		Marc Dechevrens, S. J.

Note.—Generally, the originals give the wind-force by the scale 0 to 7; no distinction between upper and lower clouds, and, in the official series, the amount by the scale 0 to 4; the rain-fall as measured at 7, 8 or 9 a. m., local time; at Clermont, 9 a. m. of the following day; the weather in general terms as published. The elevation of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; Clermont, 388 meters, or 1,272.9 feet; Commune de Grénasque, 322 meters, or 1,056.4 feet; Pic du Midi, (Summit,) 2,877 meters, or 9,439.1 feet; Pic du Midi, (Plantade,) 2,366 meters, or 7,762.6 feet; Turbes, 308 meters, or 1,010 feet. In correcting the Mont-Louis barometric observations for altitude, the constant 135. millimeters has been added. *Bouches-du-Rhône

GERMAN SERIES.

Furnished by the coöperation of Professor Dr. G. Neumayer, Director of the German Naval Observatory, Hamburg.

Bamberg			29.66	753.3	41.5	5.3	78	W			2		10	W		0	0		Prof. T. Hoh.
Berlin			29.55	750.5	46.1	7.9	74	S			1		7			0.067	1.7		Prof. Arndt.
Breslau			29.04	752.8	43.0	6.1	82	SE			3		10			0	0	Foggy	Royal University Obs'y
Carlsruhe			29.60	751.8	39.7	4.3	87	SSE			1		10			0	0		A. Seus.
Cassel			29.57	751.0	48.1	9.0	62	SW			1		10	SSW		0	0		Dr. H. Möhl.
Crefeld			29.39	746.6	50.7	10.3	78	S			2		10			0.04	1.		Director Lose.
Emden			29.40	746.7	45.7	7.6	88	S			2		10			0.079	2.0		Prof. Prestel.
Frankfort on the Main			29.60	751.9	42.8	6.0	75	SSE			1		9			0	0	Foggy	Physical Society.
Friedrichshafen	28.21	716.6	29.66	753.3	44.1	6.8	78	S			4		7			0	0	Föhn	M. Wilhelm.
Hamburg			29.42	747.3	43.7	6.5	87	ESE			2		9k,s			0.252	6.4		Captain F. Hegemann.
Kiel			29.37	745.9	40.3	4.6	90	SSE			2		10			0.209	5.3		Prof. G. Karsten.
Königsberg, (Prussia)			29.80	756.9	29.3	— 1.5	90	E			5		10			0.024	0.6	Snowing	Prof. E. Luther.
Köslin			29.66	753.3	34.7	1.5		SE			3		10			0.071	1.8		H. Müller.
Leipsic			29.58	751.2	47.8	8.8	69	S			3		9	SW		0	0		Prof. Bruhns.
Memel			29.91	759.7	28.0	— 2.2	81	E			4		10ks			0	0	Smoke-haze	Reinbrecht & Skalweit.
Münster			29.41	747.0	46.9	8.3	48	SW			4		10			0.028	0.7		Prof. E. Heis.
Neufahrwasser			29.70	754.3	33.2	0.7	85	SSE			4		10			0.319	8.1		A Lothe.
Posen			29.63	752.6	40.1	4.5	81	SSE			2		10			0	0		Dr. Magener.
Strassburg, (in Alsace)			29.61	752.2	40.5	4.9	81	SW			1		10	SW		0	0		Dr. Schur.
Stuttgart			29.61	752.0	45.0	7.5	66	E			1		10			0	0		Prof. Schoder.
Thorn																			Dr. Hasenbalg.
Treves, (Trier)			29.48	747.6	49.1	9.5	71	W			3		10			0.322	8.2	Foggy	Prof. Flesch.
Weissenburg, (Bavaria)	28.09	713.5	29.60	751.8	44.8	7.1	67	S			2		10	S		Inap.	Inap.		Dr. von Bebber.
Wustrow, Naval School			29.54	750.2	34.5	1.4	95	ESE			2		10			0	0		E. F. Schütz.
German Naval Series.																			

Note.—The elevation of Friedrichshafen is 413.4 meters, or 1,356 3 feet; Weissenburg, 431 meters, or 1,414.0 ft. In the originals the distinction between the amount of upper and lower clouds is not made. It is not always certain that the remarks in the weather column refer to the moment of observation.

GREEK SERIES.

Furnished by the coöperation of Professor Dr. J. F. Julius Schmidt, Director of the Royal Observatory at Athens.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Athens	.....	.....	30.20	767.0	59.4	15.2	.....	SW	.....	.....	.....	.....	..k	.....	.....	.....	.....	Clear	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

NOTE.—The originals give the barometer corrected, but not reduced to sea-level; occasionally the kind of clouds; the weather as published. They omit the humidity, wind-force, amount of cloudiness and rain-fall.

ITALIAN SERIES.

Furnished by the coöperation of His Excellency the Minister of Agriculture, Industry and Commerce, and the respective Observers.

Udine	.....	.....	30.04	763.0	45.9	7.7	90	Calm	0	0	.....	.....	10	.....	.....	0.024	0.6	Foggy	Prof. Giovanni Cloding
Stelvio	21.97	558.1	30.24	768.0	23.0	— 5.0	.....	W	.....	.....	8	.....	6	E	.....	0	0	.....	Signora Ernesta Manfredi.
Valdobbia	22.01	559.0	30.06	763.4	23.5	— 4.7	75	NE	.....	.....	4	.....	10	W	.....	.....	.....	Snowing	Ab. Dom. Mongini.
Padua	.....	.....	30.03	762.8	44.1	6.7	96	NE	5.6	2.5	.....	.....	10	.....	.....	0.01	0.3	Foggy	Prof. Dott. Lor nzoni.
Vicenza	.....	.....	30.04	762.9	45.1	7.3	85	NE	0.7	0.3	.....	.....	8	W	.....	0	0	.....	Conte Alm. Da Schio.
Verona	.....	.....	30.03	762.7	45.3	7.4	83	E	.....	.....	1	.....	10	.....	.....	0	0	.....	Dott. B. Bertoncelli.
Bergamo	28.64	727.4	29.99	761.8	41.0	5.0	90	NE	.....	.....	1	.....	10	.....	.....	1.06	27.0	Raining	Prof Trionfini Carlo.
Domodossola	.....	.....	30.01	762.2	41.9	5.5	97	Calm	.....	.....	0	.....	10	.....	.....	0.05	1.4	Raining	Prof. Giuseppe Oliza.
Milan	.....	.....	30.02	762.5	42.1	4.6	95	E	.....	.....	2	.....	10	.....	.....	0.33	8.5	Raining	Ab. Gio. Capelli.
Pavia	.....	.....	30.03	762.8	42.3	5.7	91	E	.....	.....	2	.....	10	.....	.....	0.098	2.5	Raining	Prof. Gio. Cantoni.
Moncalieri	.....	.....	30.04	763.1	41.2	5.1	97	NNE	0	0	.....	.....	10	.....	.....	0.48	12.3	Raining	Prof. P. F. Denza.
Mondovi	28 07	712.9	30.04	763.1	39.4	4.1	95	NW	.....	.....	1	.....	10	.....	.....	.....	.....	Snowing	Prof. D. C. Bruno.
Porto Maurizio	.....	.....	29.95	760.6	56.3	13.5	63	NE	.....	.....	4	.....	10	E	.....	0	0	.....	Prof. L. Vassallo.
Genoa	.....	.....	29.95	760.7	53.6	12.0	76	NE	2.5	1.1	.....	.....	10	SE	.....	0.08	2.	Raining	Prof. G. M. Garibaldi.
Piacenza	.....	.....	30.04	762.9	40.5	4.7	98	E	4.9	2.2	.....	.....	10	.....	.....	0.03	1.0	Raining	Dott. G. Manzi.
Parma	.....	.....	30.03	762.8	41.0	5.0	95	ESE	.....	.....	4	.....	10	.....	.....	0	0	.. ..	Prof. P. Pigorini.
Florence	.....	.....	30.02	762.4	52.7	11.5	85	NE	.....	.....	2	.....	10	S	.....	0	0	.....	Cav. F. Meucci.
Leghorn	.....	.....	29.97	761.3	56.1	13.4	76	SSE	6.9	3.1	.....	.....	10	SSE	.....	0.31	8.0	Raining	Prof. P. Monte.
Siena	28.78	730.9	30.01	762.2	50.2	10.1	93	ESE	1.3	0.6	.....	.....	10	S	.....	0	0	.....	Prof. L. Toscani.
Urbino	28.53	724.7	30.13	765.2	49.5	9.7	82	NNE	.....	.....	1	.....	9	.....	.....	0	0	.....	Prof. P. Serpieri.
Pesaro	.....	.....	30.07	763.6	41.2	5.1	95	W	0	0	.....	.....	9	S	.....	0	0	.....	Prof. Luigi Guidi.
Ancona	.....	.....	30.05	763.2	48.9	9.4	88	SE	.....	.....	2	.....	10	.....	.....	0	0	.....	Prof. F. De— Bosis.
Grosseto	.....	.....	30.02	762.5	57.2	14.0	79	ESE	.....	.....	4	.....	9	S	.....	0	0	.....	Avv. P. Ponticelli.
Rome	.....	.....	30.05	763.2	58.6	14.8	70	SE	18.6	8.3	.....	.....	10	S	.....	0	0	.....	Prof's. P. Secchi & L. Respighi.
Naples, O. U.	.....	.....	30.07	763.6	61.0	16.1	63	SW	.....	.....	1	.....	9	NW	.....	0	0	.....	Prof. L. Palmieri.
Lecce	.....	.....	30.19	766.9	57.9	14.4	82	SE	12.5	5.6	.....	.....	7	S	.....	0	0	.....	Prof. C. De—Giorgi.
Cosenza	.....	.....	30.15	765.9	55.8	13.2	65	WSW	0.7	0.3	.....	.....	0	.....	.....	0	0	.....	Prof. F. D. Conti.
Cagliari	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Prof. A. Pacinotti.
Ittiposto, (Sicily)	.....	.....	30.07	763.7	60.8	16.0	70	N	.....	.....	2	2	.....	S	.....	0	0	.....	Prof. F. Cafiero.
Palermo	.....	.....	30.00	762.0	64.8	18.2	55	WSW	1.8	0.8	.....	5	.....	.....	.....	0	0	.....	Prof. G. Cacciatore.
Caltanissetta	28.22	716.7	30.20	767.1	54.0	12.2	77	SE	.....	.....	4	10	.....	W	.....	0	0	.....	Prof. A. Pagani.
Siracusa	.....	.....	30.12	765.1	59.2	15.1	73	SW	.....	.....	1	7	.....	WSW	.....	0	0	.....	Prof. V. Giuliano.
SUB-SERIES.																			
Naples, S. R.	.....	.....	30.13	765.2	58.5	14.7	71	NE	1.3	0.6	.....	.....	2	NE	.....	0	0	.....	Prof. F. Brioschi
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

NOTE.—The originals give the wind-force by the scale 0 to 4, or the velocity in kilometers per hour; generally, no distinction between upper and lower clouds; occasionally the weather by the Vienna symbols. The elevation of Stelvio is 2,543.0 meters, or 8,342.9 feet; Valdobbia, 2,548.0 meters or 8,359.3 feet; Bergamo, 379.6 meters, or 1,245.3 feet; Monodovi, 556 meters, or 1,824.2 feet; Urbino, 451 meters, or 1,479.7 feet; Siena, 348.5 meters, or 1,143.3 feet; Caltanissetta, 570.3 meters, or 1,871.0 feet.

JAPANESE SERIES.

Tokei	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

MEXICAN SERIES.

By authority of the SECRETARY OF PUBLIC WORKS.

Furnished by the coöperation of Senor Mariano Barcena, Director of the Central Meteorological Observatory in the City of Mexico.

Mexico	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Mariano Barcena. Vicente Reyes. Miguel Perez. (Engineers in charge.)
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

NOTE.—The elevation of Mexico is 2,290 meters, or 7,512.9 feet. The rain-fall is measured at 6 a. m., local time.

NETHERLANDS' SERIES.

Furnished by the cooperation of Professor Buys Ballot, Director of the Royal Meteorological Institute of the Netherlands at Utrecht.

Flushing	.....	.....	29.30	744.1	48.9	9.4	.....	SSW	.....	.....	5	.....	.....	.....	.....	0.138	3.5	.....	
Groningen	.....	.....	29.25	743.1	46.8	8.2	.....	S	.....	.....	4	.....	.....	.....	.....	0.142	3.6	.....	
Helder	.....	.....	29.22	742.3	48.9	9.4	.....	S	.....	.....	5	.....	.....	.....	.....	0.209	5.3	.....	
Utrecht	.....	.....	29.27	743.4	50.2	10.1	78	S	.....	.....	4	.....	10	.....	.....	0.039	1.0	Dull	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

NOTE.—The originals give the wind-pressure in kilograms per square meter; for Utrecht, they give the weather as published, from which the amount of cloudiness is taken by the scale 0 to 4, without distinguishing between upper and lower clouds. It is assumed that the barometer readings have been reduced to sea-level.

NORWEGIAN SERIES.

Furnished by the coöperation of Professor H. Mohn, Director of the Royal Norwegian Meteorological Institute at Christiania.

Bergen	.....	.....	29.55	750.6	29.5	— 1.4	53	SSE	4.3	1.9	.....	.....	10	.....	.....	0	0	.....	
Brönö	.....	.....	29.39	746.5	15.8	— 9.0	63	ENE	6.7	3	.....	.....	4	.....	.....	.....	.....	.....	
Christiania	.....	.....	29.91	759.7	7.7	—13.5	88	NNE	10.5	4.7	.....	.....	10	.....	.....	.....	.....	Light snow	
Tromsö	.....	.....	29.62	752.3	21.6	— 5.8	90	SW	13.4	6	.....	.....	10	.....	.....	0.689	17.5	Snowing	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

NOTE.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols. The cloudiness and weather at Bergen refer to 2h., p. m., local time, instead of 1h., 4 min.

PORTUGUESE SERIES.

Furnished by the coöperation of J. C. de Brito Capello, Director of the Meteorological Observatory of the Infante Don Luiz at Lisbon.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Angra, (Azores)	.....	.....	29.82	757.4	58.6	14.8	75	W	18.6	8.3	.....	.....	5	.....	.....	0.134	3.4	.....	Dr. J. A. Sampaio.
Campo Major	.....	.....	29.76	756.5	54.3	12.4	70	SW	13.0	5.8	.....	.....	7	W	.....	0.933	23.7	.....	Dr. A. M. R. dos Santos.
Funchal, (Madeira)	.....	.....	30.03	762.8	61.7	16.5	86	W	11.2	5.0	.....	.....	10	.....	.....	0.047	1.2	Rain & fog...	Capt. D. A. de Cunha.
Lisbon	.....	.....	29.76	756.0	57.4	14.1	88	WSW	18.6	8.3	.....	.....	10	.....	.....	0.933	23.7	.....	The Observatory.
Ponta Delgada, (Azores)	.....	.....	29.87	758.8	62.6	17.0	76	WNW	11.9	5.3	.....	.....	4	SSW	.....	0.228	5.8	.....	
.....																			

Note.—The originals give the wind-velocity in kilometers per hour; occasionally, the weather by the Vienna symbols; the amount of cloudiness without distinguishing between upper and lower clouds; the barometer corrected but not reduced to sea-level. The rain-fall at Libson is measured at noon, instead of 0 h, 6 m., p. m.

RUSSIAN SERIES.

Furnished by the coöperation of Professor H. Wild, Director of the Imperial Central Physical Observatory of Russia, at St. Petersburg.

Warsaw	.....	.....	29.74	755.5	37.4	3.0	90	ESE	7	3	.....	.....	7	.....	.....	.....	.....	.....	Astronomical Obs.
Wilna	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Astronomical Obs.
Dorpat	.....	.....	30.28	769.0	— 3.6	—19.7	85	E	9	4	.....	.....	8	.....	.....	.....	.....	.....	Physical Cabinet.
St. Petersburg	.....	.....	30.30	771.1	—22.2	—30.1	84	WSW	2	1	.....	.....	4	.....	.....	.....	.....	.....	Central Physical Obs.
Kuopio	.....	.....	30.24	768.2	—25.6	—32.0	.....	Calm	0	0	.....	.....	0	.....	.....	.....	.....	.....	Ch. Forsten.
Kieff	.....	.....	30.01	762 2	32.9	0.5	100	SE	7	3	.....	.....	10	.....	.....	.....	.....	.....	Physical Cabinet.
Nikolaiev	.....	.....	30.19	766.7	41.0	5.0	97	S	13	6	.....	.....	10	.....	.....	.....	.....	Foggy	Kurdakof
Kertch	.....	.....	30.28	769.1	40.5	4.7	98	S	9	4	.....	.....	0	.....	.....	.....	.....	.....	Lagorio.
Moscow	.....	.....	30.40	772.1	— 5.8	—21.0	72	NW	7	3	.....	.....	.....	.....	.....	.....	.....	.....	Meteorological Obs.
Lugan	.....	.....	30.26	768.5	30.2	— 1.0	84	ESE	7	3	.....	.....	10	.....	.....	Blank	Blank	.....	Meteorological Obs.
Archangel	.....	.....	29.86	758.4	— 4.4	—20.2	91	WNW	13	6	.....	.....	10	.....	.....	.....	.....	.....	Ogorodnikof.
Tiflis	28.88	733.5	30.32	770.0	53.8	12.1	48	NW	22	10	.....	.....	1	.....	.....	.....	.....	.....	Physical Observatory.
Astrakhan	.....	.....	30.40	772.1	34.2	1.2	78	NNW	2	1	.....	.....	4	.....	.....	.....	.....	.....	Sebastianof.
Kasan	.....	.....	29.99	761.8	—10.7	—23.7	62	WNW	16	7	.....	.....	1	.....	.....	.....	.....	.....	Physical Cabinet.
Orenburg	.....	.....	30.73	780.5	— 7.8	—22.1	61	E	13	6	.....	.....	0	.....	.....	.....	.....	.....	Tschernischef.
Ekaterinburg	28.38	720.9	29.40	746.8	5.5	—14.7	69	SSW	22	10	.....	.....	10	.....	.....	.....	.....	.....	Meteorological Obs.
Nukuss	.....	.....	30.17	766.2	45.3	7.4	70	SW	4	2	.....	.....	9	.....	.....	.....	.....	.....	
Kasaly	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Bobrof.
Tashkend	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Michelson.
Barnaul	.....	.....	30.15	765.8	31.5	— 0.3	81	SW	38	17	.....	.....	10	.....	.....	.....	.....	.....	Meteorological Obs.
Yeniseisk	.....	.....	29.67	753.6	28.8	— 1.8	94	SSE	9	4	.....	.....	10	.....	.....	.....	.....	Snowing.....	Marks.
Irkutsk	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Usolzef.
Peking, (China)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Physical Observatory.
Nertchinsk	.....	.....	30.61	777.6	15.8	— 9.0	69	Calm	0	0	.....	.....	0	.....	.....	.....	.....	.....	Meteorological Obs.
Vladivostock	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Nikolaievsk, on the Amoor	.....	.....	.....	.....	33.3	0.7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	SE	2	1	.....	.....	10	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols; they omit the rain-fall. The elevation of Tiflis is 409 meters, or 1,341.8 feet; Ekaterinburg, 306.4? m., or 1,005.2? ft.; Tashkend, 494.2? m., or 1,621.3? ft.; Irkutsk, 392 m., or 1,286 ft.; Nertchinsk, 602.0? m., or 1,942.2? ft.; Oorga, 1,281.0? m., or 4,202.6? ft.

SPANISH SERIES.

Furnished by the coöperation of Antonio Aguilar, Director of the Royal Observatory at Madrid, and of Don Cecilio Pujazon, Captain R. N. Director of the Naval Observatory at San Fernando.

Madrid	.....	.....	29.71	754.5	46.9	8.3	80	SW	23.9	10.67	.....	0	7	.....	.....	0.528	13.4	Cloudy	Royal Observatory.
San Fernando	.....	.....	29.94	760.4	60.3	15.7	69	WSW	12.5	5.6	.....	0	7	.....	WSW	0.47.	12.0	.....	Naval Observatory.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

Note.—The originals give the weather in general terms, as published; rain-fall for San Fernando from preceding to following midnight; wind-velocity for Madrid in kilometers per hour.

SWEDISH SERIES.

Furnished by the coöperation of Professor R. Rubenson, Director of the Royal Swedish Meteorological Institute, at Stockholm, and of Dr. H. H. Hildebrandsson, Chief of the Meteorological Division of the Upsala Observatory.

Haparanda	.....	.....	30.04	763.1	—17.7	—27.6	77	S	.....	.....	2	.....	0	.....	.....	0	0	.....	
Umea	.....	.....	30.16	766.0	—32.1	—35.6	100	Calm	.....	.....	0	.....	0	.....	.....	0	0	.....	
Hernosand	.....	.....	30.18	766.6	—27.9	—33.3	.....	Calm	.....	.....	0	.....	0	.....	.....	0	0	.....	
Stockholm	.....	.....	29.99	761.7	15.8	— 9.0	94	ENE	.....	.....	4	.....	10	.....	.....	0.008	0.2	.....	
Wisby	.....	.....	29.91	759.6	23.7	— 4.6	95	ESE	.....	.....	6	.....	10	.....	.....	0.047	1.2	Snowing.....	
Sub-Series.																			
Upsala	.....	.....	30.04	763.1	10.2	—12.1	96	ENE	4.9	2.2	.....	.....	10	W	ESE	0.218	5.53	.....	Dr. Hildebrandsson.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

Note.—The originals give the wind-force by the scale 0 to 6, and Upsala also velocity in meters per second: occasionally, the weather by the Vienna symbols, or in general terms; no distinction between the amount of upper and lower clouds. The rain-fall is measured at 8 a. m., local time.

SWISS SERIES.

Furnished by the coöperation of Professor R. Wolf, Director of the Observatory at Zurich, and of Professor E. Plantamour, Director of the Observatory at Geneva.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Geneva	28.16	715.3	29.62	752.3	43.5	6.4	91	NNE	.....	.....	3	.....	10	.....	.....	0	0	Covered	The Observatory.
Zurich	28.02	711.6	29.69	754.1	43.5	6.4	67	NW	.....	.....	1	.....	9	.....	.....	0	0	Covered	The Observatory.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—For Geneva the corresponding departures from the normal values are: Barometer, —12.4 mm; Thermometer, +5.0 cent.; Relative Humidity, +11 per cent.

NOTE.—The rain-fall is measured at Zurich at 7 a. m. on the following day. The originals give the barometer corrected but not reduced to sea-level; the wind-force by the scale 0 to 4 for Zurich; the amount of cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The elevation of Geneva is 408 meters, or 1,339 feet, and that of Zurich 470 meters, or 1,542 feet.

TURKISH SERIES.

Furnished by the coöperation of A. Coumbary, Effendi, Director of the Central Observatory at Constantinople, and of Professor C. V. A. Van Dyck, Superintendent of the Lee Observatory at Beirut.

Constantinople	.....	.....	30.22	767.5	55.2	12.9	63	ESE	3	1.5	.....	.....	8	.....	SW	0	0	.....	
Fao, (Persian Gulf)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Salonica	.....	.....	30.21	767.2	59.5	15.3	.....	S	.....	.....	1	.....	0	.....	.....	.....	.....	.....	
Valona	.....	.....	30.17	766.2	56.8	13.8	.....	N	.....	.....	1	.....	0	.....	.....	.....	.....	.....	
Varna	.....	.....	30.08	764.0	48.2	9.0	.....	NE	.....	.....	2	.....	0	.....	.....	.....	.....	.....	
SUB-SERIES.																			
Beirut, (Syria,) Lee Obs'y	.....	.....	30.30	769.6	63.0	17.2	59	N	.....	.....	1	.....	2c	.....	.....	0	0	*D. clouds.....	Prof. C. V. A. Van Dyck.

NOTE.—The originals give the wind-force by the scale 0 to 7, (except Beirut, by the scale 0 to 12, and Constantinople velocity in meters per second;) the weather in general terms as published; no distinction between upper and lower clouds, and, except Constantinople and Beirut, the amount by the scale 0 to 4. It is assumed that the barometer is reduced to sea-level. * Detached clouds.

CANADIAN SERIES.

Furnished by the coöperation of Professor G. T. Kingston, Director of the Magnetic Observatory at Toronto, and Superintendent of the Meteorological Office of the Dominion of Canada, and the respective Observers. Those marked with a star (*) are also telegraphed daily to the office of the Chief Signal Officer, U. S. Army.

Bathurst, N. B	.....	.....	29.29	744.0	— 2.3	—19.1	77	NW	8	3.6	.....	.....	9	.....	.....	0	0	.....	Hon. J. Ferguson.
Brockville, Ontario	.....	.....	30.11	764.8	— 8	—22.2	.....	SW	4	1.8	.....	10s	.....	SW	0	0	Cloudy.....	C. R. Digg.	
*Chatham, N. B	.....	.....	29.32	744.7	— 5	—20.6	100	SW	9	4.0	.....	2k	8ks	W	W	0	0	Cloudy.....	J. A. Blair.
Charlottetown, P. E. Island	.....	.....	29.32	744.7	— 2	—18.9	87	W	8	3.6	.....	2cs	0	.....	.....	0	0	Fair	G. J. Cundall, C. E.
Cornwall, Ontario	.....	.....	30.02	762.5	— 5.4	—20.8	89	W	.....	.....	4	.....	10s	.....	.....	0.01	0.3	Threatenin	James Smith, M. A.
Dalhousie, N. B	.....	.....	29.86	758.2	— 5.0	—20.6	100	W	.....	.....	4	.....	.....	.....	.....	0.05	1.3	Snowing....	H. A. Johnson.
Esquimault, B. C	.....	.....	30.35	770.9	52.3	11.3	93	SW	.....	.....	.....	.....	10n	.....	.....	0	0	Cloudy.....	W. H. Bevis.
Fredericton, N. B	.....	.....	29.49	749.0	— 3.2	—19.6	72	NW	17	7.6	.....	.....	10n	.....	.....	0	0	Cloudy	Prof. Harrison.
*Fort Garry, Manitoba	.....	.....	29.87	758.7	— 6	—21.1	96	S	6	2.7	.....	2k	2s	.....	.....	0.062	1.57	Fair	James Stewart.
Goderich, Ontario	.....	.....	30.23	767.8	13.2	—10.4	81	NW	.....	.....	1	.....	10n	.....	.....	0.25	6.3	Light snow..	H. J. Strang, M. A.
Granton, Ontario	29.00	736.6	30.22	767.6	5.9	—14.5	.....	SE	.....	.....	1	.....	10n	.....	.....	Inap.	Inap.	Cloudy.....	James Grant.
*Halifax, N. S	.....	.....	29.45	748.0	6	—14.4	88	W	16	7.2	.....	0	2ks	.....	.....	0	0	Fair.....	F. Allison, M. A.
Hamilton, Ontario	.....	.....	30.24	768.1	10.0	—12.2	98	SW	.....	.....	4	.....	10n	.....	.....	0.05	1.3	Fair.....	G. Dickson.
Heart's Content, N. F	.....	.....	30.02	762.5	19.0	— 7.2	100	W	.....	.....	7	.....	10	.....	.....	0.03	0.8	Snowing....	E. Weedon.
*Kingston, Ontario	.....	.....	30.19	766.8	— 8	—22.2	70	W	3	1.3	.....	2c	0	.....	.....	0	0	Clear.....	S. Woods, M. A.
*Montreal, Quebec	.....	.....	29.95	760.7	— 5	—20.6	82	W	18	8.0	.....	.....	10n	.....	.....	0.01	0.3	Lightning.	C. H. McLeod, C. E.
*Ottawa, Ontario	.....	.....	30.01	762.2	— 7	—21.7	89	W	16	7.2	.....	5k	Fog	W	W	0	0	Foggy	J. B. Haney.
*Parry Sound, Ontario	.....	.....	30.21	767.3	—18	—27.8	66	W	2	0.9	.....	0	0	.....	.....	0	0	Clear.....	Rev. R. Mosley.
Port Dover, Ontario	.....	.....	30.24	768.1	5	—15.0	88	W	11	4.9	.....	2k	0	W	.....	0.05	1.3	Fair	J. Morgan.
Port Hastings, N. S	.....	.....	29.34	745.2	5.8	—14.6	.....	NW	6	2.7	.....	.....	.....	.....	.....	0	0	Fine	Peter Grant.
Port Stanley, Ontario	.....	.....	30.29	769.4	— 5	—20.6	100	NW	6	2.7	.....	10ks	.....	W	0	0	Cloudy.....	M. Payne.	
*Quebec, Quebec	.....	.....	29.77	756.1	—10	—23.3	78	W	11	4.9	.....	8k	7ks	.....	W	0	0	Fair	Capt. Ashe, R. N.
*Rockliffe, Ontario	.....	.....	30.11	764.8	—10	—23.3	96	W	10	4.5	.....	0	5s	.....	NW	0	0	Fair	
St. John, N. B	.....	.....	29.54	750.3	4	—15.6	100	W	14	6.3	.....	0	0	.....	.....	0	0	Clear.....	G. Murdoch, C. E.
*Saugeen, Ontario	.....	.....	30.17	766.3	5	—15.0	52	SE	4	1.8	.....	10s	.....	.....	.....	0.07	1.8	Cloudy.....	K. Stewart.
Stayner, Ontario	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.08	2.0	.....	R. J. Cole.
Stratford, Ontario	28.80	731.5	30.22	767.6	5.4	—14.8	93	SW	8	3.6	.....	10s	.....	.....	.....	Inap.	Inap.	Cloudy	C. J. MacGregor, M. A.
*Sydney, C. B	.....	.....	29.27	743.4	5	—15.0	95	SW	25	11.2	.....	8c	2ks	E	W	Inap.	Inap.	Fair	T. C. Hill.
*Toronto, Ontario	.....	.....	30.20	767.1	8	—13.3	87	W	7	3.1	.....	10n	.....	NW	0	0	Cloudy..	Magnetic Observatory.	
Woodstock, Ontario	.....	.....	30.24	768.1	7.0	—13.9	84	W	8	3.6	.....	.....	8s	.....	.....	0.06	1.5	Cloudy.....	J. Montgomery.
SUB-SERIES.																			
St. Johns, Newfoundland	.....	.....	29.15	740.4	18.0	— 7.8	100	W	.....	.....	.....	10k	10s	.....	.....	0.30	7.6	Stormy.....	John Delany.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
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.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—The originals for Brockville, Charlottetown, Port Dover, Port Stanley, St. Johns, N. F., Stayner and those telegraphed, give the amount of cloudiness by the scale 0 to 4. The elevation of Granton is 1,015 feet, or 309.4 m.; Stratford, 1,182 feet, or 360.3 m.

UNITED STATES SERIES.

Furnished by the coöperation of Bvt. Brig. Gen. Albert J. Myer, Chief Signal Officer, U. S. Army.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Albany, N. Y.			30.05	763.3	2	—16.7	72	NW	1	0.4		0	5s				Inap.	Fair	
Alpena, Mich.			30.17	766.3	8	—13.1	73	W	3	1.3			10s		W	0.02	0.5	Cloudy	
Atlantic City, N. J.			30.18	766.6	8	—13.3	78	W	10	4.5		0	0			0	0	Clear	
Augusta, Ga.			30.36	771.1	23	— 5.0	80	Calm	0	0		0	0			0	0	Clear	
Baltimore, Md.			30.25	768.3	11	—11.7	60	W	8	3.6		Haze	Fog			0	0	Fair	
Barnegat, N. J.			30.14	765.5	6	—14.4	93	W	19	8.5		0	Haze			0	0	Clear	
Bismarck, Dakota	28.06	712.7	29.83	757.7	10	—12.2	79	Calm	0	0			10n			0.10	2.5	Light snow	
Boston, Mass.			29.86	758.4	4	—15.6	74	W	13	5.8		1cs	Haze			0	0	Clear	
Breckenridge, Minn.			29.88	759.2	0	—17.8	69	Calm	0	0		2c	0			0	0	Clear	
Buffalo, N. Y.			30.18	766.6	10.5	—11.9	69	W	12	5.4			10s			0.08	2.0	Cloudy	
Burlington, Vt.			29.96	761.0	0	—17.8	69	W	8	3.6			10s			0	0	Cloudy	
Cairo, Ill.			30.28	769.1	19	— 7.2	84	SE	9	4.0		5c	0	W		0	0	Fair	
Cape Hatteras, N. C.			30.23	767.8	23	— 5.0	60	N	16	7.2		0	0			0	0	Clear	
Cape Henry, Va.			30.29	769.4	21	— 6.1	71	NW	28	12.5		0	0			0	0	Clear	
Cape Lookout, N. C.			30.35	770.9	23	— 5.0	60	N	14	6.3		0	0			0	0	Clear	
Cape May, N. J.			30.21	767.3	13	—10.6	81	NW	29	13.0		0	0			0	0	Clear	
Charleston, S. C.			30.34	770.6	31	— 0.6	49	NW	6	2.7		0	0			0	0	Clear	
Cheyenne, Wyoming	23.92	607.6	29.86	758.4	34	1.1	69	NW	28	12.5		8ck	2s	NW		0	0	Cloudy	
Chicago, Ill.			30.24	768.1	5	—15.0	75	S	6	2.7			10s			0	0	Cloudy	
Cincinnati, Ohio			30.30	769.6	9	—12.8	78	S	1	0.4			10s			0.06	1.5	Cloudy	
Cleveland, Ohio			30.29	769.4	9	—12.8	78	SW	8	3.6			10s		SW	0.05	1.3	Cloudy	
Corsicana, Tex.			30.32	770.1	26	— 3.9	76	S	10	4.5		0	0			0	0	Clear	
Davenport, Iowa			30.16	766.1	5	—13.3	89	SE	4	1.8			10s			0.02	0.5	Cloudy	
Denison, Tex.			30.23	767.8	29	— 1.7	77	S	4	1.8		0	0			0	0	Clear	
Denver, Col.	24.78	629.4	30.00	762.0	43	6.1	30	NW	10	4.5			8s			0	0	Cloudy	
Detroit, Mich.			30.23	767.8	9	—12.8	78	SW	4	1.8			10s			Inap.	Inap.	Cloudy	
Dodge City, Kan.	27.45	697.2	29.95	760.7	10	—12.2	78	W	16	7.2		0	5s		W	0	0	Fair	
Dubuque, Iowa			30.14	765.5	4	—15.6	74	Calm	0	0			10s			0	0	Cloudy	
Duluth, Minn.			29.89	759.2	10	—12.2	79	SW	4	1.8			10s			0.10	2.5	Cloudy	
Eastport, Me.			29.66	753.4	— 2	—18.9	84	W	16	7.2		2c,hz	5s	E		0	0	Fair	
Erie, Pa.			30.23	767.8	13	—10.6	81	W	8	3.6			10s			0.04	1.0	Cloudy	
Escanaba, Mich.			30.07	763.8	7	—13.9	77	S	16	7.2			10n			Inap.	Inap.	Light snow	
Fort Gibson, Indian Ter.			30.15	765.8	23	— 5.0	86	SE	8	3.6		0	0			0	0	Clear	
Ft. St. Michael, Alaska																			
Fort Sill, Indian Ter.	28.88	733.5	30.07	763.8	21	— 6.1	39	S	6	2.7		2c	0			0	0	Fair	
Fort Sully, Dakota	28.12	714.2	29.83	757.7	28	— 2.2	77	Calm	0	0			10s			0	0	Cloudy	
Florence, Arizona	28.70	729.0	30.26	769.1	44	6.7		SW				8c	0	N		0	0	Fair	
Galveston, Tex.			30.36	771.6	38	3.3	71	NE	5	2.2		0	0			0	0	Clear	
Grand Haven, Mich.			30.15	765.8	22	— 5.6	86	SW	12	5.4			10s		W	0.01	0.3	Cloudy	
Indianapolis, Ind.			30.34	770.6	— 2	—18.9	84	Calm	0	0		2ck	Sm'k			0.05	1.3	Smoky	
Indianola, Tex.			30.40	772.1	37	2.8	80	N	7	3.1		0	2s			0	0	Fair	
Jacksonville, Fla.			30.36	771.1	34	1.1	79	SW	2	0.9		0	0			0	0	Clear	
Keokuk, Iowa			30.09	764.3	15	— 9.4	65	SE	6	2.7			10s		SE	0.06	1.5	Cloudy	
Key West, Fla.			30.32	770.1	53	11.7	79	NE	20	8.9		5cs	0			0	0	Fair	
Kittyhawk, N. C.			30.30	769.6	18	—17.8	66	NW	16	7.2		2k	0	W		0	0	Fair	
Knoxville, Tenn.			30.39	771.9	15	— 9.4	82	Calm	0	0		10ck	0	SW		0	0	Cloudy	
La Crosse, Wis.			30.05	763.3	8	—13.3	67	S	14	6.3			10s		S	0	0	Cloudy	
Leavenworth, Kan.			30.05	763.3	20	— 6.7	85	S	8	3.6			10s			0	0	Cloudy	
Louisville, Ky.			30.36	771.1	7	—13.9	54	W	1	0.4			Sm'k			0.07	1.8	Smoky	
Lynchburg, Va.			30.36	771.1	7	—13.9	76	NW	3	1.3		0	0			0	0	Clear	
Malone, N. Y.			29.98	761.5	— 3	—19.4	83	W	10	4.5			10n		W	Inap.	Inap.	Light snow	
Marquette, Mich.			29.99	761.7	9	—12.8	78	S	8	3.6			10s			0	0	Cloudy	
Memphis, Tenn.			30.33	770.4	19	— 7.2	78	S	4	1.8		2c	Fog	W	SW	0	0	Fair	
Milwaukee, Wis.			30.22	767.6	2	—16.7	72	SW	6	2.7			10s			0.14	3.6	Cloudy	
Mobile, Ala.			30.40	772.1	30	— 1.1	78	NW	3	1.3		Haz	Fog		N	0	0	Clear	
Montgomery, Ala.			30.40	772.1	27	— 2.8	100	NW	1	0.4		Sm'k	Fog			0	0	Smoky	
Morgantown, W. Va.	29.19	741.4	30.36	771.1	10	—12.2	79	SW	5	2.2			10s		W	0.01	0.3	Cloudy	
Mt. Washington, N. H.	22.76	578.1	29.12	739.6	—25	—31.7	100	NW	98	42.9			Fog			0	0	Foggy	
Nashville, Tenn.			30.33	770.4	16	— 8.9	66	Calm	0	0		0	0			0	0	Clear	
New Haven, Conn.			30.04	763.0	9	—12.8	60	NW	5	2.2		Haz	0			0	0	Clear	
New London, Conn.			30.00	762.0	4	—15.6	74	W	8	3.6		0	1s		W	0	0	Clear	
New Orleans, La.			30.36	771.6	35	1.7	100	N	1	0.4			Fog			0	0	Foggy	
Newport, R. I.			29.96	761.0	9	—12.8	78	W	24	10.7		0	0			0	0	Clear	
New York, N. Y.			30.10	764.5	12	—11.1	61	W	8	3.6		0	Sm'k			0	0	Clear	
Norfolk, Va.			30.31	769.9	20	— 6.7	62	W	3	1.3		0	0			0	0	Clear	
North Platte, Neb.	26.99	685.5	29.66	753.9	22	— 5.6	85	W	4	1.8			10s			0	0	Cloudy	
Omaha, Neb.	28.79	713.3	29.93	760.2	21	— 6.1	85	S	2	0.9		8c	0	NW		0	0	Fair	
Oswego, N. Y.			30.14	765.5	12	—11.1	90	NW	20	8.9			10s		NW	0.02	0.5	Cloudy	
Pembina, Dakota			29.84	757.9	0	—17.8	85	S	3	1.3		10ck	0			Inap.	Inap.	Cloudy	
Philadelphia, Pa.			30.18	766.6	10	—12.2	69	NW	15	6.7		Haz	Sm'k			0	0	Fair	
Pike's Peak, Col.	17.04	448.6	29.84	757.9	7	—13.9	88	N	42	18.8			10s			0	0	Cloudy	
Pittsburgh, Pa.			30.29	769.4	11	—11.7	80	SW	4	1.8			10s		W	Inap.	Inap.	Cloudy	
Port Huron, Mich.			30.23	767.8	9	—12.8	89	SW	6	2.7			10s			0.05	1.3	Cloudy	
Portland, Me.			29.71	754.6	4	—15.6	74	W	4	1.8		0	1s			0	0	Clear	
Portland, Oregon			30.48	773.7	42	5.6	91	N	1	0.4			10s			0.25	6.3	Cloudy	
Punta Rassa, Fla.			30.36	771.1	45.5	7.5	68	N	11	4.9		0	0			0	0	Clear	
Rochester, N. Y.			30.18	766.3	10	—12.2	79	W	12	5.4			10n			0.18	4.6	Light snow	
Salt Lake City, Utah	25.99	660.1	30.32	770.1	24	— 4.4	87	S	2	0.9			10s			0	0	Cloudy	
Sandy Hook, N. J.			30.05	763.3	10	—12.2	79	NW	34	15.2		0	0			0	0	Clear	
San Diego, Cal.			30.33	770.4	49	9.4	14	NE	2	0.9		0	0			0	0	Clear	
San Francisco, Cal.			30.42	772.7	49	9.4	77	N	6	2.7		0	0			0	0	Clear	
Santa Fé, N. M.	23.37	593.6	29.91	759.7	18	— 7.8	52	W	11	4.9		8k	0	W		0	0	Fair	
Savannah, Ga.			30.38	771.6	32	0.0	60	NW	4	1.8		0	0			0	0	Clear	
Shreveport, La.			30.37	771.4	18	— 7.8	84	Calm	0	0		0	Sm'k			0	0	Clear	
Smithville, N. C.			30.35	770.9	20	— 6.7	72	N	6	2.7		0	0			0	0	Clear	
Springfield, Mass.			29.99	761.7	10	—12.2	87	NW	12	5.4		5k,cs	0	N		Inap.	Inap.	Fair	
St. Louis, Mo.			30.20	767.1	23	— 5.0	86	S	4	1.8			10s			Inap.	Inap.	Cloudy	
St. Marks, Fla.			30.39	771.9	28	— 2.2	88	N	3	1.3		0	0			0	0	Clear	
St. Paul, Minn.			29.90	759.4	10	—12.2	79	SE	6	2.7			10s			0	0	Cloudy	
St. Paul's Island, Alaska																			
Thatcher's Island, Mass.			29.88	767.7	4	—15.6	48	W	16	7.2		1k	0	W		0	0	Clear	
Toledo, Ohio			30.26	768.6	13	—10.6	81	SW	8	3.6			10s		SW	0.01	0.3	Cloudy	
Tucson, Arizona	27.85	707.4	30.40	772.1	25	— 3.9		S				1c	0	N		0	0	Clear	
Tybee Island, Ga.			30.36	771.1	26	— 3.3	77	W	4	1.8		0	Haze			0	0	Clear	
Vicksburg, Miss.			30.39	771.9	26	— 3.3	81	Calm	0	0		0	Fog			0	0	Clear	
Virginia City, M. T.	24.36	618.7	29.84	757.9	36	2.2	55	SW	4	1.8		10k	0	NW		0	0	Cloudy	
Washington, D. C.			30.30	769.6	3	—16.1	88	W	8	3.6		0	0			0	0	Clear	
Wilmington, N. C.			30.36	771.1	20	— 6.7	55	N	5	2.2		0	0			0	0	Clear	

UNITED STATES SERIES.—Continued.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Wood's Holl, Mass.	.....	.....	29.92	760.0	12	—11.1	43	NW	24	10.7	.....	0	0	.....	.....	0	0	Clear	
Yankton, Dakota	28.60	726.4	29.97	761.2	19	— 7.2	77	W	5	2.2	.....	0	0	.....	.....	0	0	Clear	
Yuma, Arizona	.....	.....	30.40	772.1	52	11.1	.....	N	.....	.....	.....	0	0	.....	.....	0	0	Clear	
Sub-Series.																			
Kingston, Jamaica, W. I.	.....	.....	30.24	768.1	74	23.3	85	Calm	0	0	.....	2c	2s	.....	NE	0.10	2.5	.....	James Gall.
Navassa, W. I.	.....	.....	.....	.....	77	25.0	.....	NE	.....	.....	3	.....	.....	.....	.....	0.50	12.7	Cloudy	F. M. Everett.
Clifton, Ja., W. I.	27.27	692.6	30.07	763.8	66	18.9	83	NE	2.0	0.9	.....	2c	0	NE	.....	1.65	41.9	Fine, Clear.	C. Partridge.
Paramaribo, D. Guiana, S.A.	.....	.....	30.01	762.2	81	27.2	87	E	.....	.....	4	.....	7ks	.....	E	0.140	3.56	½ cloudy	C. J. Hering.
Batavia, Dutch Guiana, S.A.	30.08	764.0	.....	.....	74.3	23.5	.....	E	.....	.....	.....	.....	.....	.....	.....	1.063	27.00	Showery	Dr. H. Groot.
Medellin, Colombia, S. A.	25.25	641.3	.....	.....	64.5	18.1	81	Calm	.....	.....	0	1cs	2ks	.....	.....	0.05	1.3	Fair	Thomas Herran.
York Factory, B. A.	.....	.....	29.85	758.2	— 4.0	—20.0	82	S	5	2.2	.....	0	6s	.....	N	0.04	1.0	Gloomy	J. Fortescue, W. Wood.
Honolulu, Oahu, H. I.	.....	.....	30.03	762.7	74	23.3	95	Calm	.....	.....	0	.....	.....	.....	.....	0	0	Clear	Daniel Smith.
Makawao, Maui, H. I.	.....	.....	29.94	760.5	63	17.2	77	Calm	.....	.....	0	0	2k	.....	.....	0	0	Hazy	F. L. Clarke.

Marine Series.	True course steered—	Hourly rate in knots.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	State of ocean.	Direction of swell from—	Weather.	Observer.
Schooner Addie Fuller, Tarpaulin Cove.	.....	.....	29.87	758.7	11	—11.7	90	WNW	24	10.7	.....	0	.....	.....	.....	.....	Clear	Capt. James Jorgensen.

Note.—The originals give the cloudiness by the scale 0 to 4, except York Factory, Medellin and Paramaribo. The elevation of the barometer at Bismarck is 1,677 feet, or 511.1 meters; Cheyenne, 6,057.3 ft., or 1,846.2 m.; Clifton, about 2,892 ft.. or 881.5 m.; Denver, 5,135 ft., or 1,565.2 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Florence, 1,550 (?) ft.. or 472.5 (?) m.; Makawao, 2,205 ft., or 672.1 m.; Morgantown, 1,027.9 ft., or 313.3 m.; Medellin, 4,870 ft., or 1,486.2 m.; Mt. Washington, 6,285 ft., or 1,915.6 m.; North Platte, 2,846 ft.. or 867.4 m.; Omaha, 1,054.6 ft., or 321.4 m.; Pike's Peak, 14,150.7 ft., or 4,313.1 m.; Salt Lake City, 4,362.2 ft., or 1,329.6 m.; Santa Fé, 6,862.2 (?) ft., or 2,091.6 (?) m.; Tucson, 2,513 (?) ft., or 772.1 (?) m.; Virginia City, 5,480 (?) ft., or 1,670.3 (?) m.; Yankton, 1,278 ft., or 389.5 m. The following constants are added in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Denver, 5.22 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fé, 6.54 in.; Tucson, 2.59 in.; Virginia City, 5.48 in. The elevation of Batavia is about 6 feet; the barometric readings need the addition of 0.2 mm. or 0.01 in. for reduction to sea-level.

UNITED STATES NAVAL SERIES.

By authority of the SECRETARY OF THE NAVY.

Furnished by the coöperation of the Navy Department, through Commodore Daniel Ammen, U. S. N., Chief of Bureau of Navigation.

STATIONS AND VESSELS.	TRUE COURSE TOWARDS.	HOURLY RATE IN KNOTS.	*BAROMETER AS REPORTED.		TEMPERATURE OF THE AIR.		RELATIVE HUMIDITY.	WIND.				CLOUDS.				RAIN-FALL OR MELTED SNOW IN THE PAST 24 HOURS.		STATE OF OCEAN.	DIRECTION OF SWELL FROM—	WEATHER.	OBSERVER.
								Direction.	Velocity		Force.	Amount.		Direction.							
			Inches.	Millimeters.	Fahrenheit.	Centigrade.	Per cent.	From—	Miles per hour.	Meters per second.	0—10.	Up'er 0—10.	Low'r 0—10.	Up'er From—	Low'r From—	Inches.	Millimeters.				
Alarm, New York, N. Y.	.....	.....	28.97†	735.8†	11	—11.7	.....	W	.....	.....	3	.....	2	.....	SE	0	0	.....	.....	Clear	
Colorado, New York, N. Y.	.....	.....	30.17	766.3	13	—10.6	.....	WNW	.....	.....	3–4	.....	1	.....	NW	0	0	.....	.....	‡D. clouds	
Franklin, New York, N. Y.	.....	.....	30.12	765.0	17	— 8.3	100	W	.....	.....	3	.....	2	.....	E	.....	.....	Smooth	.....	‡D. clouds	
Intrepid, New York, N. Y.	.....	.....	30.19	766.8	11	—11.7	.....	W	.....	.....	4	.....	3	.....	SE	.....	.....	.....	.....	Clear	
Minnesota, New York, N. Y.	.....	.....	30.15	765.8	12	—11.1	100	WNW	.....	.....	4	.....	2	.....	NW	.....	.....	.....	.....	Clear	
Swatara, New York, N. Y.	.....	.....	30.20	767.1	12	—11.1	.....	WNW	.....	.....	2	.....	1s	.....	.....	.....	.....	.....	.....	‡D. clouds	
Navy Yard, Pensacola, Fla.	.....	.....	30.40	772.1	31	— 0.6	.....	NNW	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Tallapoosa, Wash'gton, D. C.	.....	.....	30.15	765.8	10	—12.2	.....	SSW	.....	.....	2	.....	3	.....	N	.....	.....	.....	.....	‡D. clouds	
Navy Yard, Wash'gton, D. C.	.....	.....	30.29	769.4	2	—16.7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

* It is not known that the barometer is corrected for temperature, instrumental error or elevation. † Aneroid Barometer. ‡ Detached clouds.

COLLATED AT THE OFFICE OF THE CHIEF SIGNAL OFFICER OF THE ARMY, WASHINGTON, D. C.

The records which appear in this Bulletin are copied from the regular exchanges of this office, made in each instance in compliance with an especial request, and are published for the uses of the coöperating observers. The barometric readings in the first two columns are reduced to freezing and their respective standards; those in the second two also to mean sea-level. The "weather" is generally published as given.

When the distinction between the upper and lower strata of clouds is not reported, the *kinds* or *types*, viz: cirrus, cumulus, stratus, nimbus, scud, fracto, ballio, haze, fog and smoke, as indicated, respectively, by the letters c, k, s, n, d, f, p, hz., fg. and sm'e, are generally published with the amount in the lower-cloud column. The distinction between the upper and lower strata is carefully made in the United States Series and a portion of the Canadian Series, and the types are indicated by the above letters or their combinations in the proper column.

Albert J. Myer

Brig. Gen. (Bvt. Assg^d.,) Chief Signal Officer, U. S. A.

BULLETIN

OF

INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON JANUARY 5, 1877.

7:35 A. M. WASHINGTON mean time.

6:7 A. M. MEXICO mean time.
7:7 A. M. SAN JOSE mean time.
0:6 P. M. LISBON mean time.
0:28 P. M. MADRID mean time.
0:48 P. M. GREENWICH mean time.
0:53 P. M. PARIS mean time.
1:1 P. M. BRUSSELS mean time.
1:4 P. M. UTRECHT mean time.
1:18 P. M. BERNE mean time.
1:26 P. M. CHRISTIANIA mean time.
1:33 P. M. COPENHAGEN mean time.
1:33 P. M. ROME mean time.
1:37 P. M. BERLIN mean time.
1:49 P. M. VIENNA mean time.
1:55 P. M. STOCKHOLM mean time.
2:18 P. M. ATHENS mean time.
2:39 P. M. CONSTANTINOPLE mean time.
2:44 P. M. ST. PETERSBURG mean time.

ALGERIAN SERIES.

Furnished by the coöperation of General d'Eudeville, Commandant Supérieur du Génie in Algeria.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Nemours	.....	.....	30.03	762.7	63.1	17.3	59	Calm	.....	.....	0	.....	7	.....	.....	0	0	Cloudy.....	Charnot.
Algiers	.....	.....	29.98	761.4	61.9	16.6	.....	WSW	.....	.....	1	.....	9	.....	.....	0	0	Hidden.....	Peter.
La Calle	.....	.....	29.93	760.3	63.0	17.2	57	S	.....	.....	4	.....	8	.....	.....	0	0	Cloudy.....	Fleury.
Tunis	.....	.....	30.00	761.9	64.4	18.0	.....	WNW	.....	.....	2	.....	6	.....	.....	0	0	Fair	Jacques.
Sfax	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Gilda	.....	.....	30.06	763.5	56.8	13.8	57	W	.....	.....	4	.....	2	.....	.....	0.272	6.9	Clear	Millot.
Tebessa	.....	.....	30.00	761.9	59.5	15.3	.....	W	.....	.....	2	.....	2	.....	.....	0	0	Clear	Bourgeois.
Geriville	.....	.....	30.02	762.5	53.4	11.9	24	W	.....	.....	5	.....	3	.....	.....	0	0	Fair	Lemaillot.
Laghouat	.....	.....	29.93	760.1	60.8	16.0	41	W	.....	.....	3	.....	2	.....	.....	0	0	Clear.....	Guyot.
Biskra	.....	.....	30.05	763.2	64.2	17.9	39	NW	.....	.....	2	.....	5	.....	.....	0	0	Fair	Kuntz.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—In the originals the distinction between the amount of upper and lower clouds is apparently not made. The weather is published as given. The rain-fall is measured at 7 a. m., local time.

AUSTRIAN SERIES.

Furnished by the coöperation of Professor Ferdinand Osnaghi, Director of the Imperial and Royal Central Meteorological Institute at Vienna.

Agram	.....	.....	29.74	755.4	55.2	12.9	59	SW	.....	.....	2	.....	3	.....	.....	0	0	.....	Prof. Ivan Stozir.
Cracow, I. R. Observatory	.....	.....	29.61	752.1	52.9	11.6	57	WSW	.....	.....	2	.....	8	.....	.....	0	0	.....	Dr. Wierzbiski.
Eperies	.....	.....	29.72	754.8	40.3	4.6	84	S	.....	.....	3	.....	10s	.....	.....	0	0	.....	Julius Mikolik.
Gratz	.....	.....	29.67	753.7	50.9	10.5	68	W	.....	.....	3	.....	1	.....	.....	0	0	.....	Andreas Rospini.
Hermannstadt	28.43	722.0	29.87	758.7	43.9	6.6	69	SSE	.....	.....	1	.....	4	.....	.....	0	0	.....	Prof. Reissenberger.
Kremsmünster	28.43	722.2	29.87	758.7	43.9	6.6	69	SSE	.....	.....	1	.....	4	.....	.....	0	0	.....	Prof. C. Wagner.
Lemberg	28.28	718.4	29.62	752.4	47.5	8.6	68	NW	.....	.....	1	.....	1	.....	.....	0	0	.....	Dr. T. Stanecki.
Nyiregyhaza	.....	.....	29.66	753.1	46.2	7.9	56	S	.....	.....	1	.....	8	.....	.....	0	0	.....	Habzsuda Daniel.
Pola	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Spalato	.....	.....	29.79	756.6	57.2	14.0	80	S	.....	.....	2	.....	4cs	.....	.....	0	0	.....	I.R.Hydrographic Office.
Spaleto	.....	.....	29.82	757.4	45.1	7.3	78	S	.....	.....	3	.....	10	.....	.....	0	0	.....	Karl Stancel.
Trieste	.....	.....	29.83	757.7	54.0	12.2	73	Calm	.....	.....	0	.....	0	.....	.....	0	0	Partly cl'dy.	Prof. V. Faroli.
Vienna	.....	.....	29.55	750.5	50.9	10.5	75	Calm	.....	.....	0	.....	0	.....	.....	0	0	.....	I. R. Central Met. Obs'y.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
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.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 7 p. m., local time. The elevation of Gratz is 343.5 meters, or 1,126.9 feet; Hermannstadt, 407.8 meters, or 1,337.9 feet; Kremsmünster, 383.6 meters, or 1,258.5 feet.

BELGIAN SERIES.

Furnished by the cooperation of J. C. Houzeau, Director of the Royal Observatory at Brussels.

Arlon	.....	.....	29.65	750.6	45.0	7.2	92	SW	.....	.....	2	.....	10	.....	.....	0.295	7.5	.....	Royal Observatory.
Brussels	.....	.....	29.18	741.2	49.1	9.5	83	SW	.....	.....	2	.....	10	.....	SW	0.224	5.70	Covered	
Furnes	.....	.....	29.33	745.0	49.5	9.7	84	SSW	.....	.....	3	.....	3	.....	.....	0.051	1.3	.....	
Maseyck	.....	.....	29.48	747.4	50.0	10.0	78	SW	.....	.....	5	.....	7	.....	.....	0.079	2.0	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—In the originals, the weather is occasionally given in general notes.

BRITISH SERIES

Furnished by the coöperation of Robert H. Scott, Esq., Director of the Meteorological Office, London, Alexander Buchan, Secretary of the Scottish Meteorological Society, Edinburgh, and the respective Observers.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Aberdeen			29.04	737.6	36.0	2.2		NNW	8	3.6			9			0.160	4.06	Overcast	William Boswell.
Ardrossan			28.98	736.1	36	2.2		NE			3		9					Rain & fog	William McNeil.
Armagh, Observatory			28.96	735.6	45.6	7.6		S	13	5.8			5					*D. clouds	S. Call, for Dr. Robinson.
Birr Castle, (Parsonstown)			28.99	736.3	45.0	7.2		SSW			1		8					*D. clouds	J. Dreyer.
Bradford			29.09	738.9	43.9	6.6		S			1		6			0.22	5.6	*D. clouds	J. McLandsborough.
Bridgetown, (Barbados)			30.01	762.2	82.5	28.1		NE			3		6					*D. clouds	Sergt. J. F. Halanen, A. H. Todd. [H. C.
Cambridge, Observatory			29.23	742.4	52.0	11.1		S			2		7					*D. clouds	John McLaren.
Cardington			29.21	741.9	49.4	9.7		S			1		4					*D. clouds	T. Bell, for J. Cartmell.
Carlisle																			Maj. C. N. Martin, R. E.
Chatham, School M. E.			29.26	743.2	50.2	10.1		W			1		2					Blue sky	R. E. Power.
Dartmoor	27.67	702.8	29.16	740.7	44.4	6.9		S			5		10					Foggy	Francis Redford, M. A.
Davos Platz, (Switzerland)	24.54	623.3			37.4	3.0	76	SW			1		5			0	0	*D. clouds	J. Mac Gowan.
Donaghadee			28.95	735.3	45	7.2		SSW			4		5					*D. clouds	J. Costello.
Dover			29.29	744.0	50	10.0		SW			4		4					⅛ clouded	Thomas Mackereth.
Eccles, (near Manchester)			29.09	738.9	47.2	8.4		SW	5.6	2.5			8					*D. clouds	The Staff.
Falmouth, Observatory			29.12	739.6	47.7	8.7		W			4		7					Overcast	P'vt. G. Salmon, A. H. C.
Fort Napier, (Natal)	27.61	701.3	29.85	758.2	67.8	19.6		SE			2		10					Overcast	
Free Town, (Sierra Leone)			29.95	760.7	86.0	30.0		N			0		5					*D. clouds	Prof. A. H. Curtis.
Galway, Queen's College			28.90	734.0	44	6.7		SW			2		4					*D. clouds	Corpl. C. Aitken, A.H.C.
Gibraltar, (Mediterranean)			30.00	762.0	62.5	16.9		W			6		6					Showery	Lewis Stuart.
Glasgow, Observatory			29.00	736.6	34.0	1.1		NE			2		10					Raining	G. T. Watson.
Great Yarmouth			29.23	742.4	47	8.3		SW			3		5					Misty	The Staff, for G. B. Airy.
Greenwich, Royal Obs'y			29.25	742.9	51.2	10.7		SSW			2		6					*D. clouds	Dr. S. F. Hoskins.
Guernsey			29.28	743.7	49.5	9.7		SSW			6		5					Squally	M. P. Moyle.
Helston			29.11	739.4	50	10.0		NW			6		3k			0.24	6.1		John Tilston.
Holyhead			29.03	737.8	47	8.3		SW			2		2					Blue sky	The Staff.
Kew, Observatory			29.24	742.7	51.1	10.6		SSW	20	8.9			8					Hazy	George Mitchell.
Kingstown			29.01	736.8	47	8.3		SSE			2		7					*D. clouds	Wm. J. Harrison, F.G.S.
Leicester Museum			29.16	740.7	48.3	9.1		SW			3		2					*D. clouds	Corp'l. P. Bravis, A.H.C.
Malta, (Mediterranean)			29.98	761.5	65.0	18.3		SE			2		10k					*D. clouds	W. D. Penny.
Nairn			29.04	737.6	34	1.1		NE			2		10					Overcast	Surg. Maj. Henry.
Nassau, (Bahamas)			30.16	766.1	68.5	20.3		NE			1		8					Overcast	E. J. Lowe, F. R. S.
Nottingham, Observatory			29.16	740.7	48.0	8.9		S			3		7c,k,d		SSW	0.035	0.89	*D. clouds	Rev. Stephen Whitty.
Oscott, St. Mary's College			29.14	740.1	45.8	7.7		S			2		10					Overcast	J. Lucas.
Oxford, Radcliffe Obs'y			29.18	741.2	51	10.6		S			1		9					Overcast	John Merrifield.
Plymouth			29.10	739.1	50.1	10.1		SW			4		10					Showery	W. Kennedy.
Roche's Point			29.04	737.6	48	8.9		SW			3		5					⅛ clouded	John C. Walker.
Saint Ann's Head			29.07	738.4	45	7.2		WNW			4		8					Raining	A. P. Amy.
Saint Helier, (Jersey)			29.27	743.4	50.0	10.0		S			6		10					Overcast	Rev. C. Clouston, LL. D.
Sandwick Manse, (Orkneys)			29.13	739.9	34	1.1		ENE	22	9.8			10					Misty	F. Shaw.
Scarborough																			Sergt. W. H. Lyne.
Scutari Cemetery, (Turkey)			30.15	765.8	58.0	14.4		SE			2		5					*D. clouds	W. F. Cooper.
Sheffield			29.12	739.6	45.0	7.2		SE			2		5			0.188	4.77	Blue sky	Rev. Francis Redford
Silloth Rectory			29.00	736.6	46.0	7.8	94	SE			2		6			0.300	7.62	*D. clouds	Rev. S. J. Perry.
Stonyhurst, Observatory			29.08	738.6	45.4	7.4		SW			2		10ks					Misty	John Smith.
Stornoway, Lews C., (Hebr.)			29.03	737.3	36	2.2		E			6		10					Snowing	Rev. Charles H. Griffith
Stratfield Turgiss			29.23	742.4	50.7	10.4		W			1		7					*D. clouds	John Trotter.
Thurso			29.08	738.6	37	2.8		ENE			4		10					Snowing	W. Newcombe.
Truro, Royal Institution			29.17	740.9	50	10.0		SW			4		7					Raining	The Staff.
Valencia, Observatory			29.00	736.6	46.0	7.8		SW	27	12.1			10					*D. clouds	
Sub-Series.																			
Calf of Man, (Isle of Man)					47	8.3		SSW			4		5			0.10	2.5		Henry Mercer.
Cape Good Hope, Obs'y			30.10	764.5	79.5	26.4	39	SSE	11	4.9		0	1						The Staff, for E. J. Stone.
Hobart Town, (Tasmania)			29.33	745.0	70.0	21.1	94	Calm			0		10n			0	0	Cloudy	Francis Abbott, F.R.A.S.
Leith, Restalrig Park			29.06	738.1	37.0	2.8		E			2		10n			0.46	11.7	Overcast	Andrew Gibb.
Mauritius, Observatory			29.94	760.5	83.7	28.7	64	N	12.1	5.4		0	4		N	0.10	2.5	*D. clouds	C. Meldrum.
Melbourne, Observatory			29.65	753.1	63.4	17.4	72	SE	3	1.3			4			0	0	Fine	R. L. J. Ellery.
Monach L't-house, (Hebrides)			29.89	733.8	37	2.8		ESE			7		10			0.3	7.6		J. Youngclause.
North Unst, (Shetland Is.)			29.83	757.7	34	1.1		ENE			7	4	5		NE	Blank	Blank		Robert Burnet.

NOTE.—Generally, the originals do not give the relative humidity, rain-fall, or distinction between upper and lower clouds. The originals give the wind direction to 32 points and weather by the Beaufort notation. The originals give the barometer for Aberdeen, Cardington, Galway, Oxford, St. Helier, Sandwick, Scarborough, Stonyhurst, Leith, Monach and North Unst as read off and the cloudiness for Stornoway by the scale 0 to 4. The wind-force is given by the scale 0 to 12 in the official series; 0 to 6 in the sub-series; except in lbs. per square foot for Greenwich and Hobart Town. The rain-fall is measured at Aberdeen at 10 a. m.; Bradford, 9 a. m.; Hobart Town, 7:30 a. m.; Nottingham, 6 p. m.; Mauritius, 9 a. m., local time. The elevation of Dartmoor is 1,400 feet, or 426.7 meters; Davos Platz, 5,105? feet, or 1,556.0? meters; Fort Napier, 2,200 feet, or 670.6 meters. *Detached clouds

By authority of the
MINISTER OF FOREIGN AFFAIRS.

COSTA RICA SERIES.

Furnished by the coöperation of Senor Federico Maison, Director of the Central Office of Statistics and Meteorology.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
San José																			

DANISH SERIES.

Furnished by the coöperation of Captain N. Hoffmeyer, Director of the Royal Danish Meteorological Institute at Copenhagen.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Copenhagen			29.25	743.0	38.8	3.8	98	SW			2		10					Foggy	
Faröe			29.20	741.7	38.7	3.7	100	SW			4		10					Foggy	
Godthaab, (Greenland)			29.47	748.5	16.7	— 8.5	73	ENE			4		0						
Stykkisholm, (Iceland)			29.43	747.5	20.8	— 6.2	95	E			2		0						
Thorshavn, (Faröe)			29.32	744.7	37.2	2.9	58	E			4		5						
Vestervig			29.15	740.5	30.9	— 0.6	100	E			2		10						

NOTE.—The originals give the wind-force by the scale 0 to 6; occasionally, weather by Vienna symbols; no distinction between the amount of upper and lower clouds.

FRENCH SERIES.

Furnished by the coöperation of His Excellency, U. J. Le Verrier, Director of the Paris Observatory, and the respective Observers.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Alençon	.....	.....	29.41	746.9	50.0	10	84	SW	.....	.....	2	.....	8kn	.....	SSW	0	0	Very cloudy	Normal School.
Amiens	.....	.....	29.39	746.5	46.0	7.8	91	SW	.....	.....	2	.....	1	.....	SSW	0	0	Clear	Normal School.
Avignon	.....	.....	29.09	754.1	56.1	13.4	72	SE	.....	.....	2	.....	..n	.....	S	0.445	11.3	.....	Normal School.
Bar-sur-Seine	.....	.....	29.56	750.7	51.4	10.8	71	SW	.....	.....	2	.....	8n	.....	SW	0.626	15.9	Very cloudy	C. Saillard.
Beaumette, (near Angers)	.....	.....	29.42	747.2	52.0	11.1	93	SSE	6.5	2.9	.....	.....	10	.....	SW	0.146	3.7	Raining	Beaumette Observ'tory.
Beauvais	.....	.....	29.46	748.2	50.4	10.2	82	SSW	.....	.....	3	.....	8	.....	SW	0.226	5.75	Very cloudy	Normal School.
Besançon	.....	.....	29.63	752.6	52.5	11.4	61	S	.....	.....	4	.....	5	.....	SW	0.16	4.	Cloudy	Normal School.
Bourg en Bresse	.....	.....	29.73	755.1	50.5	10.3	93	SE	.....	.....	2	.....	8s	.....	N	0.16	4.	Cloudy	Normal School.
Bourges	.....	.....	29.55	750.5	49.6	9.8	95	SSW	.....	.....	2	.....	2	.....	SW	0.83	21.	Slightly cl'dy	Normal School.
Brest	.....	.....	29.21	741.8	51.6	10.9	82	W	.....	.....	4	.....	9	.....	W	0.069	1.75	Squally	Naval Observatory.
Carcassonne	.....	.....	29.54	750.3	53.6	12	76	E	.....	.....	2	.....	5	.....	W	0.295	7.5	Cloudy	Normal School.
Caen	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Chartres	.....	.....	29.47	748.6	50.4	10.2	98	SW	.....	.....	3	.....	5	.....	E	0.012	0.3	.....	Normal School.
Châlons-sur-Marne	.....	.....	29.53	750.1	50.7	10.4	80	S	.....	.....	4	.....	10n	.....	NE	0	0	Covered	Normal School.
Clermont	.....	.....	29.56	750.9	50.9	10.5	65	SE	.....	.....	4	.....	5	.....	S	0.272	6.9	Cloudy	Puy de Dome Obs'y.
Commercy	.....	.....	29.55	750.6	48.9	9.4	79	SW	.....	.....	4	.....	8kn	.....	SW	0.362	9.2	Very cloudy	Normal School.
Commune de Gréasque*	.....	.....	29.75	755.6	52.0	11.1	71	SE	.....	.....	4	.....	8	.....	SE	0.579	14.7	.....	M. Kina.
Grenoble	.....	.....	29.66	753.4	50.7	10.4	72	SSE	.....	.....	1	.....	0	.....	.....	0.386	9.80	Clear	Normal School.
La Roche-sur-Yon	.....	.....	29.43	747.6	48.6	9.2	95	SW	.....	.....	4	.....	10	.....	.....	0.118	3.0	Covered	Normal School.
Le Mans	.....	.....	29.43	747.5	51.4	10.8	85	S	.....	.....	4	.....	8	.....	S	0.268	6.8	Very cloudy	Normal School.
Lons-Le-Saulnier	.....	.....	29.68	753.8	50.9	10.5	75	S	.....	.....	3	.....	2	.....	S	0.094	2.40	Slightly cl'dy	Normal School.
Lorient	.....	.....	29.68	753.8	50.9	10.5	75	SW	.....	.....	4	.....	8	.....	SW	0.484	12.3	Very cloudy	Naval Observatory.
Mâcon	.....	.....	29.32	744.8	53.2	11.8	83	S	.....	.....	2	.....	5	.....	S	0.071	1.8	Cloudy	Normal School.
Metz	.....	.....	29.75	755.7	52.3	11.3	93	.....	.....	.....	3	.....	10	.....	.....	0.110	2.8	.....	M. Schuster.
Mirecourt	.....	.....	29.63	752.7	48.4	9.1	78	SW	.....	.....	2	.....	10	.....	SE	0	0	Covered	Normal School.
Nismes	.....	.....	29.65	753.0	48.2	9	81	SW	.....	.....	1	.....	0	.....	.....	0.177	4.5	Clear	Normal School.
Orleans	.....	.....	29.68	753.9	56.5	13.6	80	SE	.....	.....	2	.....	5	.....	SW	0.47	12.	Cloudy	Normal School.
Parthenay	.....	.....	29.45	747.9	51.3	10.7	82	SSW	.....	.....	3	.....	7k	.....	SW	0.200	5.09	Very cloudy	National Observatory.
Paris, Observatory	.....	.....	29.47	748.6	50.0	10.0	86	SW	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Privas	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Rochefort, Observatory	.....	.....	29.64	752.8	53.6	12	.....	S	.....	.....	2	.....	5	.....	S	0.228	5.8	Cloudy	Naval Observatory.
Rouen	.....	.....	29.47	748.6	47.7	8.7	90	S	.....	.....	4	.....	10	.....	N	0.295	7.5	Raining	Normal School.
Saint Lo	.....	.....	29.40	746.7	52.2	11.2	78	SSE	.....	.....	3	.....	2	.....	SE	0	0	Slightly cl'dy	Normal School.
Tarbes	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Villefranche	28.43	722.1	29.50	749.4	49.3	9.6	97	WSW	.....	.....	2	.....	5	.....	E	0	0	Cloudy	Normal School.
	.....	.....	29.69	754.1	51.8	11	91	SE	.....	.....	3	.....	2	.....	E	0	0	Slightly cl'dy	Normal School.
Sub-Series.																			
Fort de France, Martinique	.....	.....	29.95	760.7	77.4	25.2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	L'Abbé Marchési.
Marseilles	.....	.....	29.69	754.2	57.9	14.4	71	SSE	.....	.....	2	.....	5	.....	.....	0.010	0.40	Cloudy	Marseilles Observatory.
Mont-Louis	24.46	621.3	29.78	756.3	35.8	2.1	68	SW	11.2	5.00	.....	.....	8	.....	SW	0.114	2.9	.....	—. Falguère.
Montsouris, Paris	.....	.....	29.47	748.5	49.6	9.8	91	SW	.....	.....	3	.....	9	.....	SW	0.020	0.5	.....	Montsouris Observatory
Perpignan	.....	.....	29.51	749.6	59.0	15.0	43	SW	18.6	8.33	.....	.....	5	.....	SW	0	0	.....	Dr. Fines.
Pic du Midi, (Summit,) H. P.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. Baylac.
Pic du Midi, (Plantade,) H. P.	22.06	560.4	.....	.....	26.6	— 3.0	.....	NW	.....	.....	2	.....	10	.....	.....	0.591	15.0	Snowy	General de Nansouty.
Saint Maur, (near Paris)	.....	.....	29.48	748.7	50.2	10.1	88	SSW	.....	.....	1	.....	10	.....	.....	0.256	6.5	Very cloudy	E. Renou.
Toulouse	.....	.....	29.56	750.8	51.8	11.0	80	SE	.....	.....	2	.....	8	.....	.....	0.118	3.0	.....	Toulouse Observatory.
Tours	.....	.....	29.48	748.7	52.3	11.3	88	SSE	.....	.....	3	.....	7	.....	SW	0.276	7.0	.....	C. Marquet.
Versailles, (near Paris)	.....	.....	29.47	748.6	50.4	10.2	89	S	.....	.....	2	.....	9	.....	.....	0.016	0.40	Almost cov'd	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai)	.....	.....	30.62	777.8	30.6	— 0.8	80	N	4.7	2.1	.....	.....	2	.....	.....	0	0	.....	Marc Dechevrens, S. J.
	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

Note.—Generally, the originals give the wind-force by the scale 0 to 7; no distinction between upper and lower clouds, and, in the official series, the amount by the scale 0 to 4; the rain-fall as measured at 7, 8 or 9 a. m., local time; at Clermont, 9 a. m. of the following day; the weather in general terms as published. The elevation of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; Clermont, 388 meters, or 1,272.9 feet; Commune de Gréasque, 322 meters, or 1,056.4 feet; Pic du Midi, (Summit,) 2,877 meters, or 9,439.1 feet; Pic du Midi, (Plantade,) 2,366 meters, or 7,762.6 feet; Tarbes, 308 meters, or 1.010 feet. In correcting the Mont-Louis barometric observations for altitude, the constant 185. millimeters has been added. *Bouches-du-Rhône

GERMAN SERIES.

Furnished by the coöperation of Professor Dr. G. Neumayer, Director of the German Naval Observatory, Hamburg.

Bamberg	.....	.....	29.48	748.8	42.8	6.0	92	SW	.....	.....	2	.....	10	W	.....	0.39	10.	Raining	Prof. T. Hoh.
Berlin	.....	.....	29.43	747.6	45.3	7.4	91	S	.....	.....	1	.....	10	.....	.....	0.098	2.5	.....	Prof. Arndt.
Breslau	.....	.....	29.47	748.5	48.7	9.3	66	SW	.....	.....	6	.....	4	.....	.....	0	0	Foggy	Royal University Obs'y.
Carlsruhe	.....	.....	29.58	751.3	50.4	10.2	74	SW	.....	.....	3	.....	10	.....	.....	0.154	3.9	.....	A. Senz.
Cassel	.....	.....	29.48	748.7	47.8	8.8	88	SW	.....	.....	3	.....	8	SW	.....	0	0	.....	Dr. H. Möhl.
Crefeld	.....	.....	29.41	747.1	50.9	10.5	72	SW	.....	.....	3	.....	8	.....	.....	0.08	2.	.....	Director Lose.
Emden	.....	.....	29.41	746.9	46.0	7.8	91	SW	.....	.....	1	.....	10	.....	.....	0.071	1.8	.....	Prof. Prestel.
Frankfort on the Main	.....	.....	29.55	750.5	47.8	8.8	89	SSW	.....	.....	1	.....	8	.....	.....	0.035	0.9	.....	Physical Society.
Friedrichshafen	28.23	717.1	29.67	753.5	48.9	9.4	72	WNW	.....	.....	5	.....	1	.....	.....	0	0	.....	M. Wilhelm.
Hamburg	.....	.....	29.35	745.4	45.7	7.6	98	WSW	.....	.....	3	.....	10ks	SW	.....	0.083	2.1	Cloudy	Captain F. Hegemann.
Kiel	.....	.....	29.30	744.1	46.0	7.8	95	SW	.....	.....	2	.....	10	.....	.....	0.039	1.0	.....	Prof. G. Karsten.
Königsberg, (Prussia)	.....	.....	29.40	746.8	37.4	3.0	92	W	.....	.....	2	.....	10	.....	.....	0.102	2.6	.....	Prof. E. Luther.
Köslin	.....	.....	29.39	746.6	40.6	4.8	.....	Calm	.....	.....	0	.....	10	.....	.....	.....	.....	Raining	H. Müller.
Leipsic	.....	.....	29.48	748.9	44.2	6.8	88	SW	.....	.....	3	.....	9	SW	.....	0	0	.....	Prof. Bruhns.
Memel	.....	.....	29.39	746.6	34.2	1.2	96	S	.....	.....	3	.....	10ks	.....	.....	0.067	1.7	Light rain	Reinbrecht & Skalweit.
Münster	.....	.....	29.41	747.1	47.8	8.8	92	SW	.....	.....	4	.....	10	.....	.....	0.165	4.2	.....	Prof. E. Heis.
Neufahrwasser	.....	.....	29.39	746.5	35.6	2.0	93	SSW	.....	.....	3	.....	10	.....	.....	0.039	1.0	Raining	A Lothe.
Posen	.....	.....	29.44	747.7	43.0	6.1	88	SW	.....	.....	2	.....	10	.....	.....	0.083	2.1	.....	Dr. Magener.
Strassburg, (in Alsace)	.....	.....	29.63	752.5	50.2	10.1	81	SSW	.....	.....	2	.....	10	SW	.....	0.331	8.4	.....	Dr. Schur.
Stuttgart	.....	.....	29.60	751.8	50.0	10.0	67	W	.....	.....	2	.....	4	.....	.....	0.298	6.8	.....	Prof. Schoder.
Thorn	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Dr. Hasenbalg.
Treves, (Trier)	.....	.....	29.47	748.5	49.6	9.8	79	SW	.....	.....	4	.....	10	.....	.....	0.059	1.5	Foggy	Prof. Flesch.
Weissenburg, (Bavaria)	28.10	713.6	29.61	752.1	43.7	6.5	86	WSW	.....	.....	4	.....	10	SW	.....	0.024	0.6	.....	Dr. von Bebber.
Wustrow, Naval School	.....	.....	29.37	746.0	41.5	5.3	96	S	.....	.....	3	.....	5	.....	.....	0.327	8.3	.....	E. F. Schütz.
German Naval Series.																			

Note.—The elevation of Friedrichshafen is 413.4 meters, or 1,356 9 feet; Weissenburg, 431 meters, or 1,414.0 ft. In the originals the distinction between the amount of upper and lower clouds is not made. It is not always certain that the remarks in the weather column refer to the moment of observation.

GREEK SERIES.

Furnished by the coöperation of Professor Dr. J. F. Julius Schmidt, Director of the Royal Observatory at Athens.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Athens			30.17	766.3	61.2	16.2		S					..k					Clear	

Note.—The originals give the barometer corrected, but not reduced to sea-level; occasionally the kind of clouds; the weather as published. They omit the humidity, wind-force, amount of cloudiness and rain-fall.

ITALIAN SERIES.

Furnished by the coöperation of His Excellency the Minister of Agriculture, Industry and Commerce, and the respective Observers.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Udine			29.77	756.1	52.0	11.1	83	SW	1.2	0.6			9			0.512	13.0	Raining	Prof. Giovanni Godig.
Stelvio	21.82	554.3	29.93	760.1	24.6	— 4.1		W			6		7	NE		0	0		Signora Ernesta Manfredi.
Valdobbia	21.86	555.2	29.89	759.1	24.3	— 4.3	86	W					4	W		0	0		Ab. Dom. Mongini.
Padua			29.76	755.8	48.6	9.2	96	N	6.3	2.8			10	W		0.248	6.3	Raining	Prof. Dott. Lorenzoni.
Vicenza			29.77	756.1	48.6	9.2	97	W	0	0			10			0.839	21.3	Raining	Conte Alm. Da Schio.
Verona			29.74	755.5	50.7	10.4	84	SE			1		10			0.236	6.0	Raining	Dott. B. Bertoncelli.
Bergamo	28 43	722.0	29.79	756.6	45.0	7.2	91	NE			2		10			0.213	5.4	Raining	Prof Trionfini Carlo.
Domodossola			29.81	757.1	40.6	4.8	81	Calm			0		10			1.606	40.8	Rain & snow	Prof. Giuseppe Colla.
Milan			29.82	757.4	40.6	4.8	82	NW			1		10			0.272	6.9	Raining	Ab. Gio. Capelli.
Pavia			29.80	757.0	41.5	5.3	87	SW			4		9	SW		0.465	11.8	Raining	Prof. Gio. Cantoni.
Moncalieri			29.82	757.5	39.7	4.3	93	SSE	5.6	2.5			9	N		0.118	3.0	Raining	Prof. P. F. Denza.
Mondovi	27.85	707.4	29.83	757.6	39.7	4.3	77	S			2		10			0.846	21.5	Snowing	Prof. D. C. Bruno.
Porto Maurizio			29.80	757.0	55.0	12.8	72	WSW			4		5	NW		0.276	7.0	Raining	Prof. L. Vassallo.
Genoa			29.77	756.1	57.9	14.4	68	SE	1.2	0.8			6	S		0.705	17.9	Raining	Prof. G. M. Garibaldi.
Piacenza			29.81	757.1	41.9	5.5	88	NW	7.4	3.3			10	NW		0.327	8.3	Raining	Dott. G. Manzi.
Parma			29.82	757.3	43.5	6.4	94	W			2		10			0.256	6.5	Raining	Prof. P. Pigorini.
Florence			29.83	757.7	57.2	14.0	85	WSW			4		8	SW		0.276	7.0		Cav. F. Meucci.
Leghorn			29.81	757.2	58.5	14.7	69	W	9.4	4.2			10					Raining	Prof. P. Monte.
Siena	28.60	726.5	29.84	757.8	55.6	13.1	91	SSW	3.1	1.4			4	S		0	0		Prof. L. Toscani.
Urbino	28.26	717.7	29.85	758.2	53.8	12.1	66	SW			4		4			0	0		Prof. P. Serpieri.
Pesaro			29.79	756.7	55.2	12.9	67	SW	26.2	11.7			8	SW		0	0		Prof. Luigi Guidi.
Ancona			29.83	757.6	60.6	15.9	47	SE			2		4			0	0		Prof. F. De— Bosis.
Grosseto			29.84	758.0	59.0	15.0	77	SSE			4		5	S		0.020	0.5	Light rain	Avv. P. Ponticelli.
Rome			29.88	759.0	63.0	17.2	64	S	7.4	3.3			4	S		0.020	0.5	Light rain	Prof's P. Secchi & L. Respighi.
Naples, O. U			29.96	761.0	62.1	16.7	73	S			6		10	SSW		0	0		Prof. L. Palmieri.
Lecce			30.08	763.9	59.4	15.2	80	SSE	23.7	10.6			8	S		0	0		Prof. C. De—Giorgi.
Cosenza			30.02	762.5	55.2	12.9	71	NE	1.3	0.6			10			0	0		Prof. F. D. Conti.
Cagliari																			Prof. A. Pacinotti.
Ilipposto, (Sicily)			29.97	761.2	58.3	14.6	81	SE			2		2	S		0	0		Prof. F. Cafiero.
Palermo			29.89	759.2	66.9	19.4	36	SW	1.3	0.6			9			0	0		Prof. G. Cacciatore.
Caltanissetta	28.03	711.9	30.01	762.3	66.2	19.0	67	SE			2		10	SW		0	0		Prof. A. Pagani.
Siracusa			30.02	762.4	60.8	16.0	87	SSW			1		10	SSW		0	0		Prof. V. Giuliano.
Sub-Series.																			
Naples, S. R.			30.02	762.4	57.7	14.3	84	WSW	3.1	1.4			10	W		0	0		Prof. F. Brioschi

Note.—The originals give the wind-force by the scale 0 to 4, or the velocity in kilometers per hour; generally, no distinction between upper and lower clouds; occasionally the weather by the Vienna symbols. The elevation of Stelvio is 2,543.0 meters, or 8,342.9 feet; Valdobbia, 2,548.0 meters or 8,359.3 feet; Bergamo, 379.6 meters, or 1,245.3 feet; Mondovi, 556 meters, or 1,824.2 feet; Urbino, 451 meters, or 1,479.7 feet; Siena, 348.5 meters, or 1,143.3 feet; Caltanissetta, 570.3 meters, or 1,871.0 feet.

JAPANESE SERIES.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Tokei																			

MEXICAN SERIES.

By authority of the Secretary of Public Works.

Furnished by the coöperation of Senor Mariano Barcena, Director of the Central Meteorological Observatory in the City of Mexico.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Mexico																			Mariano Barcena. Vicente Reyes. Miguel Perez. (Engineers in charge.)

Note.—The elevation of Mexico is 2,290 meters, or 7,512.9 feet. The rain-fall is measured at 6 a. m., local time.

NETHERLANDS' SERIES.

Furnished by the cooperation of Professor Buys Ballot, Director of the Royal Meteorological Institute of the Netherlands at Utrecht.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Flushing			29.38	746.2	47.5	8.6		SW			4					0.028	0.7		
Groningen			29.25	743.0	46.4	8.0		S			6					0.083	2.1		
Helder			29.26	743.3	47.1	8.4		SSW			4					0.161	4.1		
Utrecht			29.32	744.7	48.0	8.9	80	SSW			4		5			0	0	Cloudy	

Note.—The originals give the wind-pressure in kilograms per square meter; for Utrecht, they give the weather as published, from which the amount of cloudiness is taken by the scale 0 to 4, without distinguishing between upper and lower clouds. It is assumed that the barometer readings have been reduced to sea-level.

NORWEGIAN SERIES.

Furnished by the coöperation of Professor H. Mohn, Director of the Royal Norwegian Meteorological Institute at Christiania.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Bergen			29.17	740.9	25.5	— 3.6	78	SSE	1.1	0.5			10			0.098	2.5		
Bodo			29.48	748.9	15.8	— 9.0	57	ESE	8.9	4			2						
Christiania			29.37	746.0	14.5	— 9.7	81	NE	9.2	4.1			10			0.039	1.0	Light snow	
Tromsö			29.58	751.4	10.4	—12.0	81	E	6.7	3			0			0	0		

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols. The cloudiness and weather at Bergen refer to 2h., p. m., local time, instead of 1h., 4 min.

PORTUGUESE SERIES.

Furnished by the coöperation of J. C. de Brito Capello, Director of the Meteorological Observatory of the Infante Don Luiz at Lisbon.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Angra, (Azores)	.....	.....	29.75	755.6	60.4	15.8	89	W	14.3	6.4	.....	.....	8	.....	.....	0	0	.....	Dr. J. A. Sampaio.
Campo Major	.....	.....	29.87	758.7	54.3	12.4	81	WNW	15.0	6 7	.....	.....	7	WNW	.....	0.291	7.4	.....	Dr. A. M. R. dos Santos.
Funchal, (Madeira)	.....	.....	30.17	766.4	64.9	18.3	71	WSW	6.3	2.8	.....	.....	6	.....	.....	0.205	5.2	.....	Capt. D. A. de Cunha.
Lisbon	.....	.....	29.95	760.8	57.9	14.4	73	NW	13.7	6.1	.....	.....	6	W	.....	1.441	36.6	.....	The Observatory.
Ponta Delgada, (Azores)	.....	.....	29.84	757.9	61.9	16.6	92	WSW	12.5	5.6	.....	.....	10	.....	.....	0	0	.....	

Note.—The originals give the wind-velocity in kilometers per hour; occasionally, the weather by the Vienna symbols; the amount of cloudiness without distinguishing between upper and lower clouds; the barometer corrected but not reduced to sea-level. The rain-fall at Lisbon is measured at noon, instead of 0 h. 6 m., p. m.

RUSSIAN SERIES.

Furnished by the cooperation of Professor H. Wild, Director of the Imperial Central Physical Observatory of Russia, at St. Petersburg.

Warsaw	.....	.....	29.48	748.8	41.0	5.0	89	SE	7	3	.....	.....	10	.....	.....	.....	.....	.....	Astronomical Obs.
Wilna	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Astronomical Obs.
Dorpat	.....	.....	29.36	745.8	28.2	— 2.1	96	ESE	2	1	.....	.....	10	.....	.....	Blank	Blank	.....	Physical Cabinet.
St. Petersburg	.....	.....	29.52	749.7	10.0	—12.2	91	SE	18	8	.....	.....	10	.....	.....	.....	.....	Snowing	Central Physical Obs.
Kuopio	.....	.....	29.69	754.0	— 1.3	—18.5	100	E	13	6	.....	.....	10	.....	.....	.....	.....	Snowing	Ch. Forsten.
Kieff	.....	.....	29.85	758.3	32.0	0.0	100	SSW	9	4	.....	.....	10	.....	.....	.....	.....	.....	Physical Cabinet.
Nikolaiev	.....	.....	30.06	763.5	44.8	7.1	96	S	27	12	.....	.....	7	.....	.....	.....	.....	.....	Kurdakof.
Kertch	.....	.....	30.26	768.6	48.6	9.2	89	S	2	1	.....	.....	10	.....	.....	.....	.....	Foggy	Lagorio.
Moscow	.....	.....	30.04	763.1	7.3	—13.7	88	S	13	6	.....	.....	10	.....	.....	.....	.....	.....	Meteorological Obs.
Lugan	.....	.....	30.17	766.4	37.2	2.9	90	S	13	6	.....	.....	10	.....	.....	.....	.....	.....	Meteorological Obs.
Archangel	.....	.....	30.07	763.7	—18.0	—27.8	86	SW	9	4	.....	.....	6	.....	.....	.....	.....	.....	Ogorodnikof.
Tiflis	29.10	739.2	30.58	776.7	44.4	6.9	70	SE	4	2	.....	.....	0	.....	.....	.....	.....	.....	Physical Observatory.
Astrakhan	.....	.....	30.64	778.2	28.8	— 1.8	92	E	11	5	.....	.....	10	.....	.....	.....	.....	.....	Sebastianof.
Kasan	.....	.....	30.63	778.0	—10.3	—23.5	74	S	7	3	.....	.....	10	.....	.....	.....	.....	.....	Physical Cabinet.
Orenburg	.....	.....	30.77	781.5	—18.2	—27.9	.....	E	13	6	.....	.....	0	.....	.....	.....	.....	.....	Tschernischef.
Ekaterinburg	29.28	743.5	30.36	771.2	—11.7	—24.3	70	WSW	27	12	.....	.....	0	.....	.....	.....	.....	.....	Meteorogical Obs.
Nukuss	.....	.....	30.64	778.3	30.9	— 0.6	55	NE	9	4	.....	.....	2	.....	.....	.....	.....	.....	
Kasaly	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Bobrof.
Tashkend	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Michelson.
Barnaul	.....	.....	29.90	759.4	28.9	— 1.7	78	SW	16	7	.....	.....	10	.....	.....	.....	.....	.....	Meteorological Obs.
Yeniseisk	.....	.....	29.57	751.1	34.2	1.2	89	S	11	5	.....	.....	10	.....	.....	.....	.....	Raining	Marks.
Irkutsk	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Usolzef.
Peking, (China)	.....	.....	30.57	776.5	17.8	— 7.9	68	Calm	0	0	.....	.....	0	.....	.....	.....	.....	.....	Physical Observatory.
Nertchinsk	28.20	716.2	30.54	775.8	— 8.0	—22.2	95	Calm	0	0	.....	.....	10	.....	.....	.....	.....	.....	Meteorological Obs.
Vladivostock	.....	.....	30.25	768.3	10.2	—12.1	93	NW	7	3	.....	.....	8	.....	.....	.....	.....	.....	
Nikolaievsk, on the Amoor	.....	.....	.....	.....	33.3	0.7	.....	SE	2	1	.....	.....	10	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols; they omit the rain-fall. The elevation of Tiflis is 409 meters, or 1,341.8 feet; Ekaterinburg, 306.4? m., or 1,005.2? ft.; Tashkend, 494.2? m., or 1,621.3? ft.; Irkutsk, 392 m., or 1,286 ft.; Nertchinsk, 592.0? m., or 1,942.2? ft.; Oorga, 1,281.0? m., or 4,202.6? ft.

SPANISH SERIES.

Furnished by the coöperation of Antonio Aguilar, Director of the Royal Observatory at Madrid, and of Don Cecilio Pujazon, Captain R. N. Director of the Naval Observatory at San Fernando.

Madrid	.....	.....	29.76	755.8	47.1	8.4	89	SW	19.4	8.67	.....	.....	10	.....	.....	0.071	1.8	Rainy	Royal Observatory.
San Fernando	.....	.....	30.08	762.7	60.6	15.9	79	WSW	26.4	11.8	.....	.....	10	.....	W	0.024	0.6	Light rain	Naval Observatory.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

Note.—The originals give the weather in general terms, as published; rain-fall for San Fernando from preceding to following midnight; wind-velocity for Madrid in kilometers per hour.

SWEDISH SERIES.

Furnished by the coöperation of Professor R. Rubenson, Director of the Royal Swedish Meteorological Institute, at Stockholm, and of Dr. H. H. Hildebrandsson, Chief of the Meteorological Division of the Upsala Observatory.

Haparanda	.....	.....	29.85	758.1	—18.0	—27.8	100	NE	.....	.....	2	.....	10	.....	.....	0	0	.....	
Umea	.....	.....	29.61	752.2	0.0	—17.8	89	NE	.....	.....	2	.....	10	.....	.....	0	0	.....	
Hernosand	.....	.....	29.50	749.3	3.2	—16.0	90	NE	.....	.....	4	.....	5	.....	.....	0	0	.....	
Stockholm	.....	.....	29.28	743.7	19.0	— 7.2	95	NNE	.....	.....	4	.....	10	.....	.....	0.209	5.3	.....	
Wisby	.....	.....	29.31	744.4	36.3	2.4	93	NNW	.....	.....	4	.....	10	.....	.....	0.508	12.9	.....	
Sub-Series.																			
Upsala	.....	.....	29.34	745.2	14.7	— 9.6	94	N	14.1	6.3	.....	.....	10	.....	.....	0.049	1.24	.....	Dr. Hildebrandsson.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

Note.—The originals give the wind-force by the scale 0 to 6, and Upsala also velocity in meters per second; occasionally, the weather by the Vienna symbols, or in general terms; no distinction between the amount of upper and lower clouds. The rain-fall is measured at 8 a. m., local time.

SWISS SERIES.

Furnished by the coöperation of Professor R. Wolf, Director of the Observatory at Zurich, and of Professor E. Plantamour, Director of the Observatory at Geneva.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Geneva	28.23	717.1	29.67	753.5	52.0	11.1	59	S	.....	.....	2	.....	8	.....	.....	0.079	2.0	Clouds	The Observatory.
Zurich	28.03	712.0	29.69	754.0	49.6	9.8	65	W	.....	.....	1	.....	1	.....	.....	0	0	Clear	The Observatory.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—For Geneva the corresponding departures from the normal values are: Barometer, —10.6 mm; Thermometer, +0.7 cent.; Relative Humidity, —21 per cent.

NOTE.—The rain-fall is measured at Zurich at 7 a. m. on the following day. The originals give the barometer corrected but not reduced to sea-level; the wind-force by the scale 0 to 4 for Zurich; the amount of cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The elevation of Geneva is 408 meters, or 1,339 feet, and that of Zurich 470 meters, or 1,542 feet.

TURKISH SERIES.

Furnished by the coöperation of A. Coumbary, Effendi, Director of the Central Observatory at Constantinople, and of Professor C. V. A. Van Dyck, Superintendent of the Lee Observatory at Beirut.

Constantinople	.....	.....	30.21	767.2	55.0	12.8	67	SE	11	5.0	.....	.....	3	.....	S	0	0	.....	
Fao, (Persian Gulf)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Salonica	.....	.....	30.17	766.2	63.1	17.3	.....	W	.....	.....	1	.....	0	.....	.....	.....	.....	.....	
Valona	.....	.....	30.06	763.5	61.5	16.4	.....	S	.....	.....	3	.....	5	.....	.....	.....	.....	.....	
Varna	.....	.....	30.04	763.0	53.6	12.0	.....	W	.....	.....	2	.....	0	.....	.....	.....	.....	.....	
SUB-SERIES.																			
Beirut, (Syria,) Lee Obs'y	.....	.....	30.26	768.7	66.9	19.4	65	W	.....	.....	1	.....	0	.....	.....	0	0	Blue sky	Prof. C. V. A. Van Dyck.

NOTE.—The originals give the wind-force by the scale 0 to 7, (except Beirut, by the scale 0 to 12, and Constantinople velocity in meters per second;) the weather in general terms as published; no distinction between upper and lower clouds, and, except Constantinople and Beirut, the amount by the scale 0 to 4. It is assumed that the barometer is reduced to sea-level.

CANADIAN SERIES.

Furnished by the coöperation of Professor G. T. Kingston, Director of the Magnetic Observatory at Toronto, and Superintendent of the Meteorological Office of the Dominion of Canada, and the respective Observers. Those marked with a star (*) are also telegraphed daily to the office of the Chief Signal Officer, U. S. Army.

Bathurst, N. B	.....	.....	29.88	758.9	11.9	—11.2	84	NW	3	1.3	.....	.....	10	.....	.....	0	0	.....	Hon. J. Ferguson.
Brockville, Ontario	.....	.....	30.27	768.8	— 1	—18.3	.....	Calm	0	0	.....	.....	10s	.....	SW	0	0	Cloudy	W. R. Bigg.
*Chatham, N. B	.....	.....	29.87	758.7	15	— 9.4	95	W	4	1.8	.....	.....	Haze	.....	.....	0.08	2.0	Cloudy	G. A. Blair.
Charlottetown, P. E. Island	.....	.....	29.81	757.2	17	— 8.3	82	NW	8	3.6	.....	.....	10s	.....	.....	0	0	Cloudy,	H. J. Cundall, C. E.
Cornwall, Ontario	.....	.....	30.24	768.1	—12.8	—24.9	63	W	.....	.....	1	0	1s	.....	.....	0	0	Fair	James Smith, M. A.
Dalhousie, N. B	.....	.....	30.04	763.0	.....	.....	.....	W	.....	.....	1	.....	.....	.....	.....	0.05	1.3	Overcast	H. A. Johnson.
Esquimault, B. C	.....	.....	30.31	769.9	53.2	11.8	90	SW	.....	.....	.....	8cs	0	W	.....	0.01	0.3	Cloudy	W. H. Bevis.
Fredericton, N. B	.....	.....	29.98	761.5	5.1	—14.9	77	NW	10	4.5	.....	.....	10n	.....	.....	0	0	Fair	Prof. Harrison.
*Fort Garry, Manitoba	.....	.....	29.89	759.2	9	—12.8	93	SW	4	1.8	.....	Haze	Haze	.....	.....	0	0	Hazy	James Stewart.
Goderich, Ontario	.....	.....	30.20	767.1	10.2	—12.1	92	Calm	.....	.....	0	8ck	0	W	.....	0.05	1.3	Fine	H. J. Strang, M. A.
Granton, Ontario	28.95	735.6	30.18	766.6	6.5	—14.0	.....	SE	.....	.....	1	.....	10n	.....	.....	Inap	Inap.	Cloudy	James Grant.
*Halifax, N. S	.....	.....	29.86	758.4	15	— 9.4	91	NW	8	3.6	.....	.....	8n	.....	.....	0	0	Cloudy	F. Allison, M. A.
Hamilton, Ontario	.....	.....	30.21	767.3	12.7	—10.7	90	Calm	.....	.....	0	0	0	.....	.....	0	0	Clear	G. Dickson.
Heart's Content, N. F	.....	.....	29.18	741.2	32.0	0.0	90	NW	.....	.....	4	.....	10	.....	.....	0.02	0.5	Overcast	E. Weedon.
*Kingston, Ontario	.....	.....	30.26	768.6	8	—13.3	83	NE	.....	.....	1	.....	10s	.....	.....	0	0	Cloudy	S. Woods, M. A.
*Montreal, Quebec	.....	.....	30.21	767.3	— 1	—18.3	65	W	11	4.9	.....	0	2s	.....	.....	0	0	Clear	C. H. McLeod, C. E.
*Ottawa, Ontario	.....	.....	30.24	768.1	—18	—27.8	94	Calm	0	0	.....	2cs	2s	.....	.....	0	0	Fair	J. B. Haney.
*Parry Sound, Ontario	.....	.....	30.14	765.5	10	—12.2	86	SE	8	3.6	.....	5k	5ks	S	S	0.10	2.5	Cloudy	Rev. R. Mosley.
Port Dover, Ontario	.....	.....	30.18	766.6	14	—10.0	93	SW	7	3.1	.....	5k	5n	SW	SW	0.05	1.3	Cloudy	H. Morgan.
Port Hastings, N. S	.....	.....	29.72	754.9	22.0	— 5.6	.....	NW	16	7.2	.....	.....	.....	.....	.....	0	0	Fine	Peter Grant.
Port Stanley, Ontario	.....	.....	30.18	766.6	16	— 8.9	83	SE	4	1.8	.....	.....	10ks	.....	SW	0.27	6.9	Cloudy	M. Payne.
*Quebec, Quebec	.....	.....	30.11	764.8	1	—17.2	71	W	10	4.5	.....	8k	5ks	W	SW	0	0	Fair	Capt. Ashe, R. N.
*Rockliffe, Ontario	.....	.....	30.22	767.6	— 5	—20.6	82	E	2	0.9	.....	.....	2fs	.....	W	0	0	Cloudy?	
St. John, N. B	.....	.....	30.01	762.2	7	—13.9	77	N	3	1.3	.....	.....	10ks	.....	.....	0	0	Cloudy	G. Murdoch, C. E.
*Saugeen, Ontario	.....	.....	30.10	764.5	12	—11.1	61	S	6	2.7	.....	.....	10ks	.....	.....	0	0	Cloudy	K. Stewart.
Stayner, Ontario	.....	.....	30.18	766.6	1	—17.2	91	SE	1	0.4	.....	0	0	.....	.....	0	0	Clear	R. J. Cole.
Stratford, Ontario	28.78	731.0	30.19	766.8	7.2	—13.8	93	S	1	0.4	.....	.....	10s	.....	.....	0.05	1.3	Cloudy	C. J. MacGregor, M. A.
*Sydney, C. B	.....	.....	29.67	753.6	23	— 5.0	96	SW	9	4.0	.....	0	2s	.....	W	0	0	Clear	T. C. Hill.
*Toronto, Ontario	.....	.....	30.20	767.1	11	—11.7	91	W	4	1.8	.....	0	2ks	.....	W	0.01	0.3	Fair	Magnetic Observatory.
Woodstock, Ontario	.....	.....	30.19	766.8	11.6	—11.3	96	W	2	0.9	.....	.....	10s	.....	.....	Inap.	Inap.	Cloudy	J. Montgomery.
SUB-SERIES.																			
St. Johns, Newfoundland	.....	.....	29.24	742.7	32.0	0.0	100	W	.....	.....	.....	10k	10s	.....	.....	0.08	2.0	Fair	John Delany.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—The originals for Brockville, Charlottetown, Port Dover, Port Stanley, St. Johns, N. F., Stayner and those telegraphed, give the amount of cloudiness by the scale 0 to 4. The elevation of Granton is 1,015 feet, or 309.4 m.; Stratford, 1,182 feet, or 360.3 m.

UNITED STATES SERIES.

Furnished by the coöperation of Bvt. Brig. Gen. Albert J. Myer, Chief Signal Officer, U. S. Army.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Albany, N. Y.	.....	.....	30.26	768.6	— 1	—18.3	68	NW	1	0.4	.....	.....	10ks	.....	.....	0	0	Cloudy	
Alpena, Mich.	.....	.....	30.06	763.5	13	—10.6	81	SW	5	2.2	.....	.....	10s	.....	SW	0.01	0.3	Cloudy	
Atlantic City, N. J.	.....	.....	30.31	769.9	8	—13.3	89	W	4	1.8	.....	1c	0	W	.....	0	0	Clear	
Augusta, Ga.	.....	.....	30.31	769.9	24	— 4.4	87	Calm	0	0	.....	2cs	Fog	W	.....	0	0	Fair	
Baltimore, Md.	.....	.....	30.33	770.4	8	—13.3	55	Calm	0	0	.....	2c	Fog	.....	.....	0	0	Foggy	
Barnegat, N. J.	.....	.....	30.30	769.6	14	—10.0	81	NW	9	4.0	.....	0	0	.....	.....	0	0	Clear.	
Bismarck, Dakota	28.13	714.5	29.84	757.9	25	— 3.9	87	Calm	0	0	.....	.....	10s	.....	.....	0.12	3.0	Threatening	
Boston, Mass.	.....	.....	30.13	765.3	6.5	—14.2	65	W	4	1.8	.....	0	2s	.....	.....	0	0	Fair	
Breckenridge, Minn.	.....	.....	29.99	761.7	11	—11.7	80	S	8	3.6	.....	5cs	0	S	.....	Inap.	Inap.	Fair	
Buffalo, N. Y.	.....	.....	30.18	766.6	12.0	—11.1	61	S	3	1.3	.....	2k	Sm'e	W	.....	Inap.	Inap.	Fair	
Burlington, Vt.	.....	.....	30.26	768.6	2	—16.7	72	S	1	0.4	.....	2c	0	.....	.....	0	0	Fair	
Cairo, Ill.	.....	.....	29.99	761.7	34	1.1	79	S	7	3.1	.....	10cs	0	W	.....	0	0	Cloudy	
Cape Hatteras, N. C.	.....	.....	30.29	769.4	25	— 3.9	74	NW	3	1.3	.....	2c	0	W	.....	0	0	Fair	
Cape Henry, Va.	.....	.....	30.33	770.4	21	— 6.1	71	SW	10	4.5	.....	0	0	.....	.....	0	0	Clear	
Cape Lookout, N. C.	.....	.....	30.37	771.4	28	— 2.2	67	NE	5	2.2	.....	2c	Haze	NE	.....	0	0	Fair	
Cape May, N. J.	.....	.....	30.32	770.1	18	— 7.8	68	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Charleston, S. C.	.....	.....	30.31	769.9	33	0.6	69	N	4	1.8	.....	1cs	0	.....	.....	0	0	Clear	
Cheyenne, Wyoming	24.05	610.9	29.99	761.7	28	— 2.2	77	NW	20	8.9	.....	2c	0	NW	.....	0.03	0.8	Fair	
Chicago, Ill.	.....	.....	30.02	762.5	27	— 2.8	77	SE	3	1.3	.....	.....	10s	.....	.....	0	0	Cloudy	
Cincinnati, Ohio.	.....	.....	30.05	763.3	16	— 8.9	83	SE	1	0.4	.....	2ck	2s	W	.....	Inap.	Inap.	Fair	
Cleveland, Ohio.	.....	.....	30.17	766.3	15	— 9.4	65	SE	9	4.0	.....	.....	10s	.....	.....	Inap.	Inap.	Cloudy	
Corsicana, Tex.	.....	.....	29.93	760.2	38	3.3	80	S	7	3.1	.....	Haze	5s	.....	.....	0	0	Fair	
Davenport, Iowa.	.....	.....	30.04	763.0	22	— 5.6	85	E	8	3.6	.....	.....	10s	.....	.....	Inap.	Inap.	Cloudy	
Denison, Tex.	.....	.....	29.92	760.0	37	2.8	80	W	8	3.6	.....	1cs	0	.....	.....	0	0	Clear	
Denver, Col.	24.87	631.7	30.09	764.3	30	— 1.1	78	Calm	0	0	.....	5c	0	.....	.....	0	0	Fair	
Detroit, Mich.	.....	.....	30.12	765.0	11	—11.7	79	Calm	0	0	.....	3cs	0	.....	.....	0.06	1.5	Fair	
Dodge City, Kan.	27.36	694.9	29.70	754.4	37	2.8	80	NW	34	15.2	.....	0	5s	.....	NW	0	0	Fair	
Dubuque, Iowa.	.....	.....	30.03	762.7	22	— 5.6	85	Calm	0	0	.....	.....	10s	.....	.....	Inap.	Inap.	Cloudy	
Duluth, Minn.	.....	.....	29.98	761.5	12	—11.1	80	SW	6	2.7	.....	.....	10s	.....	.....	0	0	Cloudy	
Eastport, Me.	.....	.....	29.99	761.7	4	—15.6	74	W	14	6.3	.....	.....	10s	.....	NW	0	0	Cloudy	
Erie, Pa.	.....	.....	30.16	766.1	16	— 8.9	83	SE	12	5.4	.....	8ck	Haz	W	.....	0	0	Fair	
Escanaba, Mich.	.....	.....	30.02	762.5	15	— 9.4	82	Calm	0	0	.....	.....	10s	.....	.....	0.05	1.3	Cloudy	
Fort Gibson, Indian Ter.	.....	.....	29.80	756.9	37	2.8	80	S	3	1.3	.....	.....	10s	.....	.....	0	0	Cloudy	
Ft. St. Michael, Alaska	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Fort Sill, Indian Ter.	28.75	730.2	29.89	759.2	35	1.7	52	W	15	6.7	.....	5cs	0	W	.....	0	0	Fair	
Fort Sully, Dakota.	28.27	718.0	29.99	761.7	30	— 1.1	68	NW	10	4.5	.....	.....	10s	.....	NW	0.08	2.0	Cloudy	
Florence, Arizona.	28.58	725.9	30.16	766.1	40	4.4	.....	S	.....	.....	.....	0	0	.....	.....	0	0	Clear	
Galveston, Tex.	.....	.....	29.99	761.7	48	8.9	92	N	6	2.7	.....	.....	10s	.....	.....	0.19	4.8	Threatening	
Grand Haven, Mich.	.....	.....	30.06	763.5	19	— 7.2	78	SE	7	3.1	.....	.....	10s	.....	.....	0.09	2.3	Cloudy	
Indianapolis, Ind.	.....	.....	30.03	762.7	18	— 7.8	84	E	2	0.9	.....	.....	10s,sm	.....	.....	Inap.	Inap.	Cloudy	
Indianola, Tex.	.....	.....	30.02	762.5	43	6.1	83	N	4	1.8	.....	.....	10s	.....	S	0	0	Cloudy	
Jacksonville, Fla.	.....	.....	30.25	768.3	36	2.2	80	NE	3	1.3	.....	8k	Fog	.....	.....	0	0	Foggy	
Keokuk, Iowa.	.....	.....	29.94	760.5	20	— 6.7	85	NE	6	2.7	.....	.....	10s	.....	NE	0	0	Cloudy	
Key West, Fla.	.....	.....	30.12	765.0	58	14.4	81	NE	8	3.6	.....	5cs	0	.....	.....	0	0	Fair	
Kittyhawk, N. C.	.....	.....	30.36	771.1	22	— 5.6	72	SW	3	1.3	.....	0	2s	.....	.....	0	0	Fair	
Knoxville, Tenn.	.....	.....	30.30	769.6	9	—12.8	78	E	1	0.4	.....	0	0	.....	.....	0	0	Clear	
La Crosse, Wis.	.....	.....	30.00	762.0	20	— 6.7	70	Calm	0	0	.....	.....	10s	.....	.....	0	0	Cloudy	
Leavenworth, Kan.	.....	.....	29.91	759.7	26	— 3.3	88	N	6	2.7	.....	2c	2s	.....	.....	0	0	Fair	
Louisville, Ky.	.....	.....	30.06	763.5	21	— 6.1	85	Calm	0	0	.....	.....	10s	.....	.....	Inap	Inap.	Cloudy	
Lynchburg, Va.	.....	.....	30.34	770.6	— 3	—19.4	82	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Malone, N. Y.	.....	.....	30.24	768.1	— 3	—19.4	66	SW	1	0.4	.....	0	0	.....	.....	0.02	0.5	Clear	
Marquette, Mich.	.....	.....	29.95	760.7	20	— 6.7	70	SW	8	3.6	.....	.....	10s	.....	.....	0.10	2.5	Cloudy	
Memphis, Tenn.	.....	.....	30.03	762.7	32	0.0	79	S	4	1.8	.....	5c	Sm'e	S	.....	0	0	Fair	
Milwaukee, Wis.	.....	.....	30.05	763.3	19	— 7.2	84	W	2	0.9	.....	.....	10s	.....	.....	0	0	Cloudy	
Mobile Ala.	.....	.....	30.09	764.3	40	4.4	90	SE	2	0.9	.....	.....	10s	.....	.....	0.01	0.3	Cloudy	
Montgomery, Ala.	.....	.....	30.21	767.3	32	0.0	74	SE	4	1.8	.....	2cs	Haz	W	SE	0	0	Fair	
Morgantown, W. Va.	29.06	738.1	30.20	767.1	14	—10.0	81	Calm	0	0	.....	.....	10s	.....	W	0	0	Cloudy	
Mt. Washington, N. H.	23.41	594.6	29.77	756.1	0	—17.8	100	N	36	16.1	.....	.....	Fog	.....	.....	0	0	Foggy	
Nashville, Tenn.	.....	.....	30.07	763.8	33	0.6	69	SE	6	2.7	.....	0	5s	.....	S	0	0	Fair	
New Haven, Conn.	.....	.....	30.23	767.8	12	—11.1	79	Calm	0	0	.....	Haze	Fog	.....	.....	0	0	Fair	
New London, Conn.	.....	.....	30.21	767.3	11	—11.7	60	W	6	2.7	.....	0	0	.....	.....	0	0	Clear	
New Orleans, La.	.....	.....	30.04	763.0	47	8.3	85	E	6	2.7	.....	.....	10n	.....	.....	0.01	0.3	Light rain	
Newport, R. I.	.....	.....	30.20	767.1	13	—10.6	79	W	11	4.9	.....	0	0	.....	.....	0	0	Clear	
New York, N. Y.	.....	.....	30.27	768.8	11	—11.7	60	NW	7	3.1	.....	2ck	Sm'e	W	.....	0	0	Fair	
Norfolk, Va.	.....	.....	30.33	770.4	21	— 6.1	85	S	4	1.8	.....	0	Sm'e	.....	.....	0	0	Clear	
North Platte, Neb.	27.07	687.6	29.71	754.6	33	0.6	90	N	16	7.2	.....	.....	10ks	.....	N	0.10	2.5	Cloudy	
Omaha, Neb.	28.79	731.3	29.92	760.0	27	— 2.8	88	N	4	1.8	.....	5ck	2s	NW	.....	0	0	Fair	
Oswego, N. Y.	.....	.....	30.23	767.8	16	— 8.9	91	SE	2	0.9	.....	.....	10n	.....	.....	Inap.	Inap.	Light snow	
Pembina, Dakota	.....	.....	29.86	758.4	12	—11.1	80	Calm	0	0	.....	.....	10s	.....	.....	0	0	Cloudy	
Philadelphia, Pa.	.....	.....	30.33	770.4	14	—10.0	63	N	7	3.1	.....	Haze	Sm'e	.....	.....	0	0	Fair	
Pike's Peak, Col.	17.60	447.0	29.81	757.2	4	—15.6	87	NE	20	8.9	.....	2cs	5s	NE	.....	0.08	2.0	Fair	
Pittsburgh, Pa.	.....	.....	30.20	767.1	11	—11.7	90	S	3	1.3	.....	.....	Fog	.....	.....	0	0	Foggy	
Port Huron, Mich.	.....	.....	30.14	765.5	12	—11.1	80	S	5	2.2	.....	.....	10s	.....	W	0.02	0.5	Cloudy	
Portland, Me.	.....	.....	30.08	764.0	5	—15.0	75	Calm	0	0	.....	0	1s,hz.	.....	.....	0	0	Clear	
Portland, Oregon	.....	.....	30.43	772.9	48	8.9	92	NW	2	0.9	.....	.....	10s	.....	.....	0	0	Cloudy	
Punta Rassa, Fla.	.....	.....	30.18	766.6	51.5	10.8	65	E	11	4.9	.....	0	0	.....	.....	0	0	Clear	
Rochester, N. Y.	.....	.....	30.19	766.8	10	—12.2	79	SW	8	3.6	.....	5ck	0	W	.....	Inap.	Inap.	Fair	
Salt Lake City, Utah.	25.98	659.9	30.31	769.9	33	0.6	79	SE	4	1.8	.....	.....	10s	.....	.....	In up.	Inap.	Cloudy	
Sandy Hook, N. J.	.....	.....	30.24	768.1	14	—10.0	82	W	20	8.9	.....	0	0	.....	.....	0	0	Clear	
San Diego, Cal.	.....	.....	30.13	765.3	55	12.8	19	NE	3	1.3	.....	0	0	.....	.....	0	0	Clear	
San Francisco, Cal.	.....	.....	30.25	768.9	57	13.9	57	SW	12	5.4	.....	0	0	.....	.....	0	0	Clear	
Santa Fé, N. M.	23.32	592.3	29.86	758.4	26	— 3.3	64	NW	7	3.1	.....	0	0	.....	.....	0	0	Clear	
Savannah, Ga.	.....	.....	30.30	769.6	32	0.0	79	NE	2	0.9	.....	1c	Fog	NE	.....	0	0	Clear	
Shreveport, La.	.....	.....	30.01	762.2	32	0.0	90	Calm	0	0	.....	.....	10s	.....	.....	0	0	Cloudy	
Smithville, N. C.	.....	.....	30.32	770.1	26	— 3.3	77	NE	5	2.2	.....	2c	0	W	.....	0	0	Fair	
Springfield, Mass.	.....	.....	30.21	767.3	8	—13.3	77	Calm	0	0	.....	Haze	0	.....	.....	0	0	Clear	
St. Louis, Mo.	.....	.....	29.93	760.2	32	0.0	79	S	4	1.8	.....	.....	Fog	.....	.....	0	0	Foggy	
St. Marks, Fla.	.....	.....	30.22	767.6	34	1.1	79	E	4	1.8	.....	.....	10s	.....	.....	0	0	Cloudy	
St. Paul, Minn.	.....	.....	29.97	761.2	18	— 7.8	84	Calm	0	0	.....	.....	10s	.....	.....	0	0	Cloudy	
St. Paul's Island, Alaska	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Thatcher's Island, Mass.	.....	.....	30.10	764.5	8	—13.3	55	NW	12	5.4	.....	1k	0	NW	.....	0	0	Clear	
Toledo, Ohio.	.....	.....	30.11	764.8	19	— 7.2	76	SE	3	1.3	.....	.....	10s	.....	.....	0.05	1.3	Cloudy	
Tucson, Arizona.	27.71	703.8	30.20	767.6	27	— 2.8	.....	S	.....	.....	.....	2c	0	NW	.....	0	0	Clear	
Tybee Island, Ga.	.....	.....	30.30	769.6	36	2.2	90	E	6	2.7	.....	2c	Fog	W	.....	0	0	Fair	
Vicksburg, Miss.	.....	.....	30.10	764.5	38	3.3	90	SE	6	2.8	.....	.....	10s,sm'	.....	.....	0	0	Cloudy	
Virginia City, M. T.	24.36	618.7	29.84	757.9	42	5.6	65	SW	14	6.3	.....	.....	10ks	.....	NW	0	0	Cloudy	
Washington, D. C.	.....	.....	30.34	770.6	— 1	—18.3	84	SW	1	0.4	.....	1cs	Sm'e	W	.....	0	0	Fair	
Wilmington, N. C.	.....	.....	30.35	770.9	25	— 3.9	63	E	1	0.4	.....	2c	Fog	SW	.....	0	0	Fair	

UNITED STATES SERIES.—CONTINUED.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Wood's Holl, Mass.	.....	.....	30.19	766.8	14	—10.0	63	NW	12	5.4	.....	0	2s	.....	NW	0	0	Fair	
Yankton, Dakota	28.69	728.7	30.04	763.0	26	— 3.3	87	NW	2	0.9	.....	.....	10n	.....	.....	0.07	1.8	Sleeting	
Yuma, Arizona	.....	.....	30.22	767.6	58	14.4	.....	N	.....	.....	.....	0	0	.....	.....	0	0	Clear	
Sub-Series.																			
Kingston, Jamaica, W. I.	.....	.....	30.19	766.8	73	22.8	81	N	6	2.7	.....	5c	2s	.....	.....	0.08	2.0	.....	James Gall.
Navassa, W. I.	.....	.....	.....	.....	81	27.2	.....	NE	.....	.....	2	.....	.....	.....	.....	0	0	Clear	F. M. Everett.
Clifton, Ja., W. I.	27.22	691.4	30.02	762.5	67	19.4	84	S	0.5	0.2	.....	8c	0	S	.....	1.22	31.0	Fine	C. Partridge.
Paramaribo, D. Guiana, S.A.	.....	.....	30.07	763.8	79	26.1	87	E	.....	.....	2	7ks	8n	E	.....	1.010	25.65	Cloudy	C. J. Hering.
Batavia, Dutch Guiana, S.A.	30.10	764.5	.....	.....	76.1	24.5	.....	E	.....	.....	.....	.....	.....	.....	.....	0.423	10.7t	Showery	Dr. H. Groot.
Medellin, Colombia, S. A.	25.23	640.8	.....	.....	66.0	18.9	79	Calm	.....	.....	0	3k	0	.....	.....	0	0	Fair	Thomas Herran.
York Factory, B. A.	.....	.....	29.82	757.4	— 5.0	—20.6	82	N	6	2.7	.....	.....	9s	.....	.....	0.02	0.5	Snowing	J. Fortescue, W. Wood.
Honolulu, Oahu, H. I.	.....	.....	30.04	763.0	74	23.3	95	S	.....	.....	2	.....	.....	.....	.....	0	0	Hazy	Daniel Smith.
Makawao, Maui, H. I.	.....	.....	29.94	760.5	60	15.6	76	Calm	.....	.....	0	0	0	.....	.....	0	0	.....	F. L. Clarke.

Marine Series.	True course towards.	Hourly rate in knots.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	State of ocean.	Direction of swell from—	Weather.	Observer.
Schooner Addie Fuller, Tarpaulin Cove.	.....	.....	30.08	764.0	16	— 8.9	74	WNW	11	4.9	.....	0	0	.....	.....	.....	.....	Clear	Capt. James Jorgensen.

NOTE.—The originals give the cloudiness by the scale 0 to 4, except York Factory, Medellin and Paramaribo. The elevation of the barometer at Bismarck is 1,677 feet, or 511.1 meters; Cheyenne, 6,057.3 ft., or 1,846.2 m.; Clifton, about 2,892 ft., or 881.5 m.; Denver, 5,135 ft., or 1,565.2 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Florence, 1,550 (?) ft., or 472.5 (?) m.; Makawao, 2,205 ft., or 672.1 m.; Morgantown, 1,027.9 ft., or 313.3 m.; Medellin, 4,876 ft., or 1,486.2 m.; Mt. Washington, 6,285 ft., or 1,915.6 m.; North Platte, 2,846 ft., or 867.4 m.; Omaha, 1,054.6 ft., or 321.4 m.; Pike's Peak, 14,150.7 ft., or 4,313.1 m.; Salt Lake City, 4,362.2 ft., or 1,329.6 m.; Santa Fe, 6,862.2 (?) ft., or 2,091.6 (?) m.; Tucson, 2,513 (?) ft., or 772.1 (?) m.; Virginia City, 5,480 (?) ft., or 1,670.3 (?) m.; Yankton, 1,278 ft., or 389.5 m. The following constants are added in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Denver, 5.22 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fe, 6.54 in.; Tucson, 2.59 in.; Virginia City, 5.48 in. The elevation of Batavia is about 6 feet; the barometric readings need the addition of 0.2 mm. or 0.01 in. for reduction to sea-level.

UNITED STATES NAVAL SERIES.

By authority of the **SECRETARY OF THE NAVY.**

Furnished by the coöperation of the Navy Department, through Commodore Daniel Ammen, U. S. N., Chief of Bureau of Navigation.

STATIONS AND VESSELS.	True course toward—	Hourly rate in knots.	*Barometer as reported.		Temperature of the Air.		Relative Humidity.	Wind.				Clouds.				Rain-fall or melted snow in the past 24 hours.		State of Ocean.	Direction of swell from—	Weather.	Observer.
								Direction.	Velocity		Force.	Amount.		Direction.							
												Up'er	Low'r	Up'er	Low'r						
			Inches.	Millimeters.	Fahrenheit.	Centigrade.	Per cent.	From—	Miles per hour.	Meters per second.	0—10.	0—10.	0—10.	From—	From—	Inch's.	Millimeters.				
Wabash, Boston, Mass	—	—	30.19	766.8	7	—13.9	.....	Calm	.....	.....	0	.....	7	.....	S & E	.....	.....	.....	.....	Hazy	.....
Alarm, New York, N. Y.	.....	.....	29.12‡	739.6‡	13	—10.6	.....	W	.....	.....	2	.....	3	.....	NE	0	0	.....	.....	Hazy	.....
Colorado, New York, N. Y.	.....	.....	30.33	770.4	12.5	—10.8	.....	W	.....	.....	2	.....	3	.....	E	0	0	.....	.....	Hazy	.....
Franklin, New York, N. Y.	.....	.....	30.32	770.1	17	— 8.3	100	W	.....	.....	3	.....	1	.....	.....	.....	.....	Smooth	.....	†D. clouds	.....
Intrepid, New York, N. Y.	.....	.....	30.30	769.6	13	—10.6	.....	W	.....	.....	2	.....	3	.....	NE	.....	.....	.....	.....	Hazy	.....
Minnesota, New York, N. Y.	.....	.....	30.33	770.4	13	—10.4	100	W	.....	.....	2	.....	3	.....	.....	.....	.....	.....	.....	Clear	.....
Swatara, New York, N. Y.	.....	.....	30.20	767.1	11	—11.7	.....	W	.....	.....	2	.....	1c	.....	.....	.....	.....	.....	.....	†D. clouds	.....
Navy Yard, Norfolk, Va.	.....	.....	30.38‡	771.6‡	20	— 6.7	.....	SSW	.....	.....	2	.....	8k	.....	NE	.....	.....	.....	.....	Hazy	.....
Navy Yard, Pensacola, Fla.	.....	.....	30.15	765.8	46	7.8	.....	NE	.....	.....	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Navy Yard, Portsmouth, N.H.	.....	.....	30.06	763.5	3	—16.1	.....	W	.....	.....	3	.....	.....	.....	E	.....	.....	.....	.....	Clear	.....
St. Louis, League Island, Pa.	.....	.....	30.32	770.1	7	—13.9	.....	S	.....	.....	1	.....	1	.....	E	0	0	.....	.....	Clear	.....
Despatch, Washington, D. C.	.....	.....	30.28‡	769.1	— 9	—22.8	.....	Calm	.....	.....	0	.....	4	.....	.....	.....	.....	.....	.....	Clear	.....
Tallapoosa, Wash'gton, D. C.	.....	.....	30.20	767.1	10	—12.2	.....	NNE	.....	.....	2	.....	6	.....	.....	.....	.....	.....	.....	†D. clouds	.....
Navy Yard, Wash'gton, D. C.	.....	.....	30.30	769.6	— 2	—18.9	.....	Calm	.....	.....	0	.....	3	.....	.....	.....	.....	.....	.....	Clear	.....

* It is not known that the barometer is corrected for temperature, instrumental error or elevation. † Aneroid Barometer. ‡ Detached clouds.

COLLATED AT THE OFFICE OF THE CHIEF SIGNAL OFFICER OF THE ARMY, WASHINGTON, D. C.

The records which appear in this Bulletin are copied from the regular exchanges of this office, made in each instance in compliance with an especial request, and are published for the uses of the coöperating observers. The barometric readings in the first two columns are reduced to freezing and their respective standards; those in the second two also to mean sea-level. The "weather" is generally published as given.

When the distinction between the upper and lower strata of clouds is not reported, the *kinds* or *types*, viz: cirrus, cumulus, stratus, nimbus, scud, fracto, pallio, haze, fog and smoke, as indicated, respectively, by the letters c, k, s, n, d, f, p, hz., fg. and sm'e, are generally published with the amount in the lower-cloud column. The distinction between the upper and lower strata is carefully made in the United States Series and a portion of the Canadian Series, and the types are indicated by the above letters or their combinations in the proper column.

Albert J. Myer

Brig. Gen. (Bvt., Assgd.,) Chief Signal Officer, U. S. A.

BULLETIN

OF

INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON JANUARY 6, 1877.

7:35 A. M. WASHINGTON mean time.

6:7 A. M. MEXICO mean time.
7:7 A. M. SAN JOSE mean time.
0:6 P. M. LISBON mean time.
0:28 P. M. MADRID mean time.
0:43 P. M. GREENWICH mean time.
0:53 P. M. PARIS mean time.
1:1 P. M. BRUSSELS mean time.
1:4 P. M. UTRECHT mean time.
1:13 P. M. BERNE mean time.

1:26 P. M. CHRISTIANIA mean time.
1:33 P. M. COPENHAGEN mean time.
1:33 P. M. ROME mean time.
1:37 P. M. BERLIN mean time.
1:49 P. M. VIENNA mean time.
1:55 P. M. STOCKHOLM mean time.
2:18 P. M. ATHENS mean time.
2:39 P. M. CONSTANTINOPLE mean time.
2:44 P. M. ST. PETERSBURG mean time.

ALGERIAN SERIES.

Furnished by the coöperation of General d'Endeville, Commandant Supérieur du Génie in Algeria.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Nemours	.....	.....	30.06	763.4	64.4	18.0	59	Calm	.....	.....	0	.....	5	.....	.....	0	0	Fair	Charnot.
Algiers	.....	.....	30.04	763.1	64.2	17.9	.....	W	.....	.....	2	.....	7	.....	.....	0.512	13.0	Cloudy	Peter.
La Calle	.....	.....	29.97	761.2	60.4	15.8	71	NW	.....	.....	3	.....	7	.....	.....	Inap.	Inap.	Cloudy	Fleury.
Tunis	.....	.....	30.07	763.7	60.8	16.0	.....	W	.....	.....	2	.....	6	.....	.....	0	0	Fair	Jacques.
Sfax	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Saida	.....	.....	30.11	764.9	58.1	14.5	63	SSW	.....	.....	3	.....	2	.....	.....	0	0	Clear	Millot.
Tebessa	.....	.....	30.07	763.6	50.4	10.2	.....	W	.....	.....	2	.....	10	.....	.....	0	0	Hidden	Bourgeois.
Gerfville	.....	.....	30.10	764.6	54.9	12.7	50	SSE	.....	.....	3	.....	3	.....	.....	0	0	Fair	Lemaillot.
Laghouat	.....	.....	30.04	763.0	55.8	13.2	36	NW	.....	.....	3	.....	1	.....	.....	0	0	Clear	Guyot.
Biskra	.....	.....	30.11	764.9	64.0	17.8	49	NW	.....	.....	4	.....	5	.....	.....	0	0	Fair	Kuntz.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
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NOTE.—In the originals the distinction between the amount of upper and lower clouds is apparently not made. The weather is published as given. The rain-fall is measured at 7 a. m., local time.

AUSTRIAN SERIES.

Furnished by the cooperation of Professor Ferdinand Osnaghi, Director of the Imperial and Royal Central Meteorological Institute at Vienna.

Agram	.....	.....	29.95	760.6	48.9	9.4	83	SW	.....	.....	1	.....	10	.....	.....	0	0	.....	Prof. Ivan Stozir.
Cracow, I. R. Observatory	.....	.....	29.89	759.3	45.7	7.6	72	NE	.....	.....	1	.....	1	.....	.....	0	0	.....	Dr. Wierzbiski.
Eperies	.....	.....	29.96	761.0	41.9	5.5	89	S	.....	.....	1	.....	9k,s	.....	N	0	0	.....	Julius Mikolik.
Gratz	28.65	727.7	29.93	760.1	44.6	7.0	82	W	.....	.....	2	.....	5	.....	.....	0	0	.....	Andreas Rospini.
Hermannstadt	28.61	726.8	30.08	763 0	40 8	4.9	77	SE	.....	.....	1	.....	10	.....	.....	0	0	.....	Prof. Reissenberger.
Kremsmünster	28.51	724.2	29.85	759.1	39.9	4.4	80	Calm	.....	.....	0	.....	3	.....	.....	0	0	.....	Prof. C. Wagner.
Lemberg	.....	.....	29.93	760.2	48.9	9.4	76	SW	.....	.....	1	.....	0	.....	.....	0	0	.....	Dr. T. Stanecki.
Nyiregyhaza	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Habzsuda Daniel.
Pola	.....	.....	29.92	760.0	56.5	13.6	86	ESE	.....	.....	2	.....	10ks	.....	.....	0	0	.....	I.R.Hydrographic Of'ce.
Szegedin	.....	.....	29.99	761.7	47.3	8.5	83	Calm	.....	.....	0	.....	10	.....	.....	0	0	.....	Karl Stancel.
Trieste	.....	.....	29.98	761.5	52.5	11.4	87	Calm	.....	.....	0	.....	2	.....	.....	0	0	Almost clear	Prof. V. Farolfi.
Vienna	.....	.....	29.91	759.7	37.9	3.3	95	Calm	.....	.....	0	.....	10	.....	.....	0	0	.....	I. R. Central Met. Obs'y.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
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NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 7 p. m., local time. The elevation of Gratz is 343.5 meters, or 1,126.9 feet; Hermannstadt, 407.8 meters, or 1,337.9 feet; Kremsmünster, 383.6 meters, or 1,258.5 feet.

BELGIAN SERIES.

Furnished by the cooperation of J. C. Houzeau, Director of the Royal Observatory at Brussels.

Arlon	.....	.....	29.70	754.3	45.9	7.7	86	SSW	.....	.....	2	.....	8	.....	.....	0.091	2.3	.....	Royal Observatory.
Brussels	.....	.....	29.52	749.8	48.2	9.0	86	SW	.....	.....	3	.....	10	.....	SW	0.016	0.40	Covered	
Furnes	.....	.....	29.39	746.6	47.8	8.8	87	SSW	.....	.....	3	.....	7	.....	.....	0.165	4 2	.....	
Maseeyck	.....	.....	29.56	750.9	49.5	9.7	88	SSW	.....	.....	5	.....	2	.....	.....	0.027	0.5	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—In the originals, the weather is occasionally given in general notes.

BRITISH SERIES

Furnished by the coöperation of Robert H. Scott, Esq., Director of the Meteorological Office, London, Alexander Buchan, Secretary of the Scottish Meteorological Society, Edinburgh, and the respective Observers.

STATIONS.	Barometer. Corrected for instrumental error and temperature. Inches.	Barometer. Corrected for instrumental error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Upper. 0—10.	Clouds. Amount. Lower. 0—10	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Aberdeen			29.08	738.6	35.4	1.9		NW	5	2.2			7			0.040	1.0	Misty	William Boswell.
Ardrossan			29.02	737.1	41	5.0							2					Light rain	William McNeil.
Armagh, Observatory			28.89	733.8	44.0	6.7		ESE	16	7.2			10					Raining	S. Call, for Dr. Robinson.
Birr Castle, (Parsonstown)			28.70	729.0	47.2	8.4		SE			2-3		10					Overcast	J. Dreyer.
Bradford			29.14	740.1	42.8	6.0		S			2		10			0.14	3.6	Overcast	J. McLandsborough.
Bridgetown, (Barbados)			30.03	762.7	80.5	26.9		NE			4		9					Overcast	Sergt. J. F. Halanen, A.
Cambridge, Observatory			29.21	741.9	46.5	8.1		S			1		10			Blank	Blank	Threatening	H. Todd. [H.C.
Cardington			29.20	741.7	48.0	8.9		S			1		10					Raining	John McLaren.
Carlisle																			T. Pell, for J. Cartmell.
Chatham, School M. E			29.30	744.2	47.7	8.7		SW			4		10					Raining	Maj. C. N. Martin, R.E.
Dartmoor	27.54	699.5	29.01	736.8	47.4	8.6		Var.			8		10					Raining	R. E. Power.
Davos Platz, (Switzerland)	24.69	d27.1			34.4	1.3	76	Calm			0		6			0	0	*D. clouds	Francis Redford, M. A.
Donaghadee			28.99	736.3	45	7.2		SSE			4		7					*D. clouds	J. Mac Gowan.
Dover			29.33	745.0	49	9.4		SSW			5		9					Raining	J. Costello.
Eccles, (near Manchester)			29.08	738.6	44.0	6.7		SE	4.2	1.9			10					Drizzling	Thomas Mackereth.
Falmouth, Observatory			28.88	733.5	52.2	11.2		S			7		10					Rain and fo	The Staff.
Fort Napier, (Natal)	27.62	701.5	29.86	758.4	73.3	22.9		E			2		8					*D. clouds	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.96	761.0	84.0	28.9		N			0		3					*D. clouds	
Galway, Queen's College			28.52	724.4	47	8 3		NE			3		4					Raining	Prof. A. H. Curtis.
Gibraltar, (Mediterranean)			29.97	761.2	66.6	19.2		S			3		6					Showery	Corpl. C. Aitken, A.H.C.
Glasgow, Observatory			29.04	737.6	38.8	3.8		S			2		5					Bluesky	Lewis Stuart.
Great Yarmouth			29.28	743.7	46	7.8		S			3		8					*D. clouds	G. T. Watson.
Greenwich, Royal Obs'y			29.23	742.4	48.9	9.4		SSW			5		10					Raining	The Staff, for G. B. Airy.
Guernsey			29.18	741.2	52	11.1		SSW			6		10			Blank	Blank	Squally	Dr. S. E. Roskins.
Helston			28.90	734.0	53	11.7		SW			4		10m			0.38	9.7	Raining	M. P. Moyle.
Holyhead			28.90	734.0	45	7.2		E			4		10					Misty	John Tilston.
Kew, Observatory			29.21	741.9	48.9	9.4		S	26	11.6			10					Raining	The Staff.
Kingstown			28.80	733.0	46	7.8		SE			6		10					Raining	George Mitchell.
Leicester Museum			29.11	739.4	45.7	7.6		S			1		10					Drizzling	Wm. J. Harrison, F.G.S.
Malta, (Mediterranean)			30.06	763.5	66.6	19.2		SW			2		4k					*D. clouds	Corp'l. P. Bravis, A.H.C.
Nairn			29.04	737.6	34	1.1		SE			1		10					Overcast	W. D. Penny.
Nassau, (Bahamas)			29.98	761.5	73.5	23.1		SE			4		3					*D. clouds	Surg. Maj. Henry.
Nottingham, Observatory			29.12	739.6	44.5	6.9		S			2		10n,d		SE	0.12f	3.18	Raining	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			29.07	738 4	43.6	6.4		SE			2-3		10					Drizzling	Rev. Stephen Whitty.
Oxford, Radcliffe Obs'y			29.13	739.9	48	8.9		SE			1		10					Drizzling	J. Lucas.
Plymouth			29.00	736.6	51.7	10.9		S			6		10					Raining	John Merrifield.
Roche's Point			28.61	726.7	49	9.4		SE			7		10					Raining	W. Kennedy.
Saint Ann's Head			28.83	732.3	50	10.0		SE			6		10					Raining	John C. Walker.
Saint Heller, (Jersey)			29.23	742.4	52.8	11.6		S			6		10					Overcast	A. P. Amy.
Sandwick Manse, (Orkneys)			29.10	739.1	34.8	1.6		E	15	7.2			8					*D. clouds	Rev. C. Clouston, LL. D.
Scarborough																			F. Shaw.
Scutari Cemetery, (Turkey)			30.22	767.6	60.2	15.7		SSE			1		6					*D. clouds	Sergt. W. H. Lyne.
Sheffield			29.12	739.6	42.7	5.9		S			1		10			0.228	5.79	Raining	W. F. Cooper.
Silloth Rectory			28.96	735.6	42.7	5.9	93	SE			1		8			0.230	5.84	*D. clouds	Rev. Francis Redford
Stonyhurst, Observatory			29.18	741.2	43.2	6.2		SE			1		10n					Raining	Rev. S. J. Perry.
Stornoway, Lews C., (Hebr.)			28.94	735.1	43	6.1		SE			5		5					Threatening	John Smith.
Stratfield Turgiss			29. 23	742.4	50.0	10.0		S			2		10					Raining	Rev. Charles H. Griffith
Thurso			29. 7	738.4	37	2.8		ESE			2		8					Gloomy	John Trotter.
Truro, Royal Institution			28.89	733.8	52	11.1		S			8		10					Raining	W. Newcombe.
Valencia, Observatory			28.46	722.9	50.3	10.2		S	35	15.6			10					Drizzling	The Staff.
SUB-SERIES.																			
Calf of Man, (Isle of Man)					45	7.2		S			4		10			0	0		Henry Mercer.
Cape Good Hope, Obs'y			30.2:	767.6	71.7	22.1	45	SSE	22	9.8		0	1						The Staff, for E. J. Stone.
Hobart Town, (Tasmania)			29.32	744.7	66.0	18 9	94	W			5		4k			0.03	0.8		Francis Abbott, F.R.A.S.
Leith, Restalrig Park			29.11	739.4	38.(	3.3		E			1					0.26	6.6	Fine	Andrew Gibb.
Mauritius, Observatory			29.92	760.0	84.1	28.9	63	NNW	13.4	6.0		0	6		N	0.01	0.3	Squally	C. Meldrum.
Melbourne, Observatory			29.84	757.9	66.4	19.1	73	SW	14	6.3			4			0	0	Fine	R. L. J. Ellery.
Monach L't-house, (Hebrides)			28.90	734.0	45	7.2		S			6		10			0.4	10.2		J. Youngclause.
North Unst, (Shetland Is.)			29.12	739.6	36	2.2		ENE			6	2	4	E					Robert Burnet.

NOTE.—Generally, the originals do not give the relative humidity, rain-fall, or distinction between upper and lower clouds. The originals give the wind direction to 32 points and weather by the Beaufort notation. The originals give the barometer for Aberdeen, Cardington, Galway, Oxford, St. Heller, Sandwick, Scarborough, Stonyhurst, Leith, Monach and North Unst as read off and the cloudiness for Stornoway by the scale 0 to 4. The wind-force is given by the scale 0 to 12 in the official series; 0 to 6 in the sub-series; except in lbs. per square foot for Greenwich and Hobart Town. The rain-fall is measured at Aberdeen at 10 a. m.; Bradford, 9 a. m.; Hobart Town, 7:30 a. m.; Nottingham, 6 p. m.; Mauritius, 9 a. m., local time. The elevation of Dartmoor is 1,400 feet, or 426.7 meters; Davos Platz, 5,105? feet, or 1,556.0? meters; Fort Napier, 2,200 feet, or 670.6 meters. *Detached clouds

By authority of the MINISTER OF FOREIGN AFFAIRS.

COSTA RICA SERIES.

Furnished by the coöperation of Senor Federico Maison, Director of the Central Office of Statistics and Meteorology.

San José																			

DANISH SERIES.

Furnished by the cooperation of Captain N. Hoffmeyer, Director of the Royal Danish Meteorological Institute at Copenhagen.

Copenhagen			29.40	746.7	38.8	3.8	93	SW			2		10					Raining	
Fanöe			29.31	744.4	38.7	3.7	100	S			4		10					Raining	
Godthaab, (Greenland)			29.74	755.5	21.0	—6.1	74	Calm			0		10						
Stykkisholm, (Iceland)			29.65	753.1	10.6	—11.9	93	NE			6		5						
Thorshavn, (Faröe)			29.20	741.7	35.2	1.8	73	E			6		10						
Vestervig			29.23	742.4	36.3	2.4	100	S			4		10					Raining	

NOTE.—The originals give the wind-force by the scale 0 to 6; occasionally, weather by Vienna symbols; no distinction between the amount of upper and lower clouds.

FRENCH SERIES.

Furnished by the cooperation of His Excellency, U. J. Le Verrier, Director of the Paris Observatory, and the respective Observers.

STATIONS.	Barometer. Corrected for instru'm'tal error and temperature. Inches.	Barometer. Corrected for instru'm'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Alengon	.....	.....	29.48	748.9	51.8	11	70	SSW	.....	.....	2	.....	2kn	.....	SSW	0.063	1.6	Slightly cl'dy	Normal School.
Amiens	.....	.....	29.39	746.5	50.0	10.0	84	SW	.....	.....	2	.....	8	.....	SW	0.063	1.6	Very cloudy	Normal School.
Avignon	.....	.....	29.91	759.6	48.2	9	92	WSW	.....	.....	1	.....	0	.....	.....	0.134	3.4	Clear	Normal School.
Bar-sur-Seine	.....	.....	29.68	753.9	50.9	10.5	62	SW	.....	.....	3	.....	0	.....	.....	0	0	Clear	C. Saillard.
Beaumette, (near Angers)	.....	.....	29.40	746.8	52.7	11.5	54	S	37.8	16.9	.....	.....	.....	.....	SW	0.142	3.6	.....	Beaumette Observ'tory.
Beauvais	.....	.....	29.51	749.6	50.2	10.1	76	S	.....	.....	3	.....	8	.....	SW	0	0	Very cloudy	Normal School.
Besançon	.....	.....	29.77	756.1	50.0	10	68	SSW	.....	.....	3	.....	0	.....	.....	0.098	2.5	Clear	Normal School.
Bourg en Bresse	.....	.....	29.90	759.5	49.8	9.9	75	SE	.....	.....	2	.....	0	.....	.....	0	0	Clear	Normal School.
Bourges	.....	.....	29.80	756.8	51.4	10.8	82	S	.....	.....	2	.....	2	.....	S	0.106	2.7	Slightly cl'dy	Normal School.
Brest	.....	.....	29.03	737.4	50.2	10.1	92	SSW	.....	.....	7	.....	10	.....	SSW	0.256	6.50	Raining	Naval Observatory.
Carcassonne	.....	.....	29.74	755.4	54.1	12.3	92	E	.....	.....	2	.....	1	.....	W	0.138	3.5	Clear	Normal School.
Caen	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Chartres	.....	.....	29.52	749.8	50.9	10.5	84	S	.....	.....	6	.....	2	.....	NE	0	0	.....	Normal School.
Châlons-sur-Marne	.....	.....	29.65	753.2	51.4	10.8	70	SSW	.....	.....	4	2c	.....	NNE	.....	0.012	0.3	Slightly cl'dy	Normal School.
Clermont	.....	.....	29.70	754.4	52.5	11.4	50	S	.....	.....	3	.....	2	.....	S	0	0	Slightly cl'dy	Puy de Dome Obs'y.
Commercy	.....	.....	29.71	754.6	47.7	8.7	76	SW	.....	.....	4	.....	2k,ks	.....	SW	0	0	Slightly cl'dy	Normal School.
Commune de Gréasque*	.....	.....	29.93	760.3	53.6	12.0	67	SE	.....	.....	2	.....	8	.....	SE	0.331	8.4	.....	M. Kina.
Grenoble	.....	.....	29.83	757.7	51.1	10.6	54	ENE	.....	.....	1	.....	0	.....	.....	0	0	Clear	Normal School.
La Roche-sur-Yon	.....	.....	29.60	749.2	49.6	9.8	76	SE	.....	.....	6	.....	5	.....	N	0.315	8.0	Cloudy	Normal School.
Le Mans	.....	.....	29.47	748.6	50.7	10.4	64	SW	.....	.....	6	.....	2	.....	SW	0.083	2.1	Slightly cl'dy	Normal School.
Lons-Le-Saulnier	.....	.....	29.84	757.9	49.8	9.9	72	S	.....	.....	1	.....	0	.....	.....	0.138	3.50	Clear	Normal School.
Lorient	.....	.....	29.24	742.6	54.3	12.4	70	SSE	.....	.....	7	.....	10	.....	.....	0.783	19.9	Raining	Naval Observatory.
Mâcon	.....	.....	29.55	755.5	50.9	10.5	84	Calm	.....	.....	0	.....	0	.....	.....	0	0	Clear	Normal School.
Metz	.....	.....	29.79	756.7	47.3	8.5	76	SW	.....	.....	4	.....	5	.....	SW	0.020	0.5	Very fine	M. Schuster.
Mirecourt	.....	.....	29.78	756.3	46.6	8.1	80	SSW	.....	.....	4	.....	2	.....	SE	0	0	Slightly cl'dy	Normal School.
Nismes	.....	.....	29.91	759.6	57.2	14	69	SE	.....	.....	1	.....	0	.....	.....	0.31	8.	Clear	Normal School.
Orleans	.....	.....	29.58	751.3	51.4	10.8	81	S	.....	.....	2	.....	0	.....	.....	0.08	2.	Clear	Normal School.
Paris, Observatory	.....	.....	29.55	750.5	50.4	10.2	89	S	.....	.....	4	.....	3ck	.....	SW	0.081	2.07	Slightly cl'dy	National Observatory.
Parthenay	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Privas	.....	.....	29.83	757.6	52.2	11.2	.....	SE	.....	.....	1	.....	0	.....	.....	0.12	3.	Clear	Normal School.
Rochefort, Observatory	.....	.....	29.54	750.2	52.2	11.2	57	SE	.....	.....	5	.....	8	.....	N	0.315	8.0	¾ covered	Naval Observatory.
Rouen	.....	.....	29.45	747.9	51.1	10.6	72	SW	.....	.....	2	.....	10	.....	SW	0.256	6.5	Covered	Normal School.
Saint Lo	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Tarbes	28.54	725.0	29.60	751.8	58.8	14.9	48	ESE	.....	.....	2	.....	5	.....	E	0.08	2.	Cloudy	Normal School.
Villefranche	.....	.....	29.84	757.8	53.6	12	84	SE	.....	.....	3	.....	2	.....	.....	0	0	Slightly cl'dy	Normal School.
Sub-Series.																			
Fort de France, Martinique	.....	.....	29.91	759.7	77.0	25	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	L'Abbé Marchési.
Marseilles	.....	.....	29.89	759.1	57.7	14.3	76	SSW	.....	.....	2	.....	5	.....	.....	0.535	13.60	Cloudy	Marseilles Observatory.
Mont-Louis	24.69	627.1	30.00	762.1	53.8	1.0	57	SW	29.8	13.33	.....	.....	5	.....	W	0.043	1.1	.....	—, Falguère.
Montsouris, Paris	.....	.....	29.56	750.8	50.0	10.0	80	SW	.....	.....	3-4	.....	.....	.....	SW	0.094	2.4	.....	Montsouris Observatory
Perpignan	.....	.....	29.78	756.5	54.9	12.7	59	SW	14.9	6.66	.....	.....	2	.....	NW	0	0	.....	Dr. Fines.
Pic du Midi, (Summit,) H. P.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. Baylac.
Pic du Midi, (Plantade,) H. P.	22.23	564.7	.....	.....	30.6	— 0.8	.....	W	.....	.....	3	.....	4	.....	.....	0.205	5.2	Fair	General de Nansouty.
Saint Maur, (near Paris)	.....	.....	29.55	750.5	52.7	11.5	70	S	.....	.....	4	...	1	.....	.....	0.165	4.2	.....	E. Renou.
Toulouse	.....	.....	29.72	755.0	52.2	11.2	61	SSE	.....	.....	4	.....	5	.....	.....	0.008	0.2	.....	Toulouse Observatory.
Tours	.....	.....	29.54	750.3	52.5	11.4	67	S	.....	.....	7	.....	3	.....	W	0.043	1.1	.....	C. Marquet.
Versailles, (near Paris)	.....	.....	29.54	750.4	51.1	10.6	75	SW	.....	.....	3	.....	7	.....	.....	0.128	3.26	Fair	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai)	.....	.....	30.53	775.5	28.8	— 1.8	100	NNE	0	0	.....	.....	0	.....	.....	0	0	.....	Marc Dechevrens, S. J.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Note.—Generally, the originals give the wind-force by the scale 0 to 7; no distinction between upper and lower clouds, and, in the official series, the amount by the scale 0 to 4; the rain-fall as measured at 7, 8 or 9 a. m., local time; at Clermont, 9 a. m. of the following day; the weather in general terms as published. The elevation of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; Clermont, 388 meters, or 1,272.9 feet; Commune de Gréasque, 322 meters, or 1,056.4 feet; Pic du Midi, (Summit,) 2,877 meters, or 9,439.1 feet; Pic du Midi, (Plantade,) 2,366 meters, or 7,762.6 feet; Tarbes, 308 meters, or 1.010 feet. In correcting the Mont-Louis barometric observations for altitude, the constant 135. millimeters has been added. *Bouches-du-Rhône

GERMAN SERIES.

Furnished by the coöperation of Professor Dr. G. Neumayer, Director of the German Naval Observatory, Hamburg.

Bamberg	.....	.....	29.76	755.9	46.9	8.3	74	SW	.....	.....	3	.....	5	WSW	.....	0.020	0.5	.....	Prof. T. Hoh.
Berlin	.....	.....	29.68	753.8	47.8	8.8	72	S	.....	.....	1	.....	3	.....	.....	0.028	0.7	.....	Prof. Arndt.
Breslau	.....	.....	29.80	757.0	45.5	7.5	84	SSE	.....	.....	2	.....	7	.....	.....	0	0	Foggy	Royal University Obs'y.
Carlsruhe	.....	.....	29.75	755.6	52.2	11.2	57	SW	.....	.....	4	.....	9	.....	.....	0.079	2.0	.....	A. Senz.
Cassel	.....	.....	29.74	755.3	48.6	9.2	60	SSW	.....	.....	2	.....	8	SW	.....	0.075	1.9	.....	Dr. H. Möhl.
Crefeld	.....	.....	29.66	750.9	50.0	10.5	69	S	.....	.....	4	.....	5	.....	.....	0.08	2.	.....	Director Lose.
Emden	.....	.....	29.53	750.0	45.0	7.2	88	WSW	.....	.....	3	.....	5	.....	.....	0.177	4.5	.....	Prof. Prestel.
Frankfort on the Main	.....	.....	29.76	755.8	49.6	9.8	72	SSW	.....	.....	2	.....	7	.....	.....	0.039	1.0	.....	Physical Society.
Friedrichshafen	28.40	721.4	29.84	758.0	47.8	8.8	65	S	.....	.....	1	.....	1	.....	.....	0	0	.....	M. Wilhelm.
Hamburg	.....	.....	29.50	749.3	42.1	5.6	97	SW	.....	.....	6	.....	10ks	SW	.....	0.178	4.4	Stormy	Captain F. Hegemann.
Kiel	.....	.....	29.41	747.1	43.5	6.4	90	SW	.....	.....	6	.....	10	.....	.....	0.102	2.6	.....	Prof. G. Karsten.
Königsberg, (Prussia)	.....	.....	29.78	756.4	37.6	3.1	98	SW	.....	.....	2	.....	10	.....	.....	0.295	7.5	.....	Prof. E. Luther.
Koslin	.....	.....	29.67	753.5	43.3	6.3	.....	SSW	.....	.....	4	.....	10	.....	.....	0.169	4.3	Raining	H. Müller.
Leipsic	.....	.....	29.74	755.3	47.5	8.6	65	SW	.....	.....	4	.....	3	WSW	.....	0	0	.....	Prof. Bruhns.
Memel	.....	.....	29.79	756.6	34.0	1.1	98	S	.....	.....	4	.....	10	.....	.....	0.154	3.9	Foggy	Reinbrecht & Skalweit.
Münster	.....	.....	29.38	746.3	49.8	9.9	74	SW	.....	.....	6	.....	10	.....	.....	0	0	.....	Prof. E. Heis.
Neufahrwasser	.....	.....	29.74	755.4	34.5	1.4	96	SSW	.....	.....	3	.....	10	.....	.....	0.083	2.1	Foggy	A Lothe.
Posen	.....	.....	29.76	756.0	45.3	7.4	77	SW	.....	.....	2	.....	9	.....	.....	0	0	.....	Dr. Magener.
Strassburg, (in Alsace)	.....	.....	29.80	756.8	50.2	10.1	62	SW	.....	.....	3	.....	4	SW	.....	0	0	.....	Dr. Schur.
Stuttgart	.....	.....	29.78	756.5	49.6	9.8	64	W	.....	.....	1	.....	5	.....	.....	0	0	.....	Prof. Schoder.
Thorn	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Dr. Hasenbalg.
Treves, (Trier)	.....	.....	29.63	752.7	48.9	9.4	75	S	.....	.....	8	.....	10	.....	.....	Inap.	Inap.	.....	Prof. Flesch.
Weissenburg, (Bavaria)	28.30	718.8	29.82	757.3	46.4	8.0	65	S	.....	.....	2	.....	4	S	.....	0	0	.....	Dr. von Bebber.
Wustrow, Naval School	.....	.....	29.55	750.5	42.8	6.0	87	S	.....	.....	4	.....	10	.....	.....	0.110	2.8	.....	E. F. Schütz.
German Naval Series.																			
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Note.—The elevation of Friedrichshafen is 413.4 meters, or 1,356 3 feet; Weissenburg, 431 meters, or 1,414.0 ft. In the originals the distinction between the amount of upper and lower clouds is not made. It is not always certain that the remarks in the weather column refer to the moment of observation.

GREEK SERIES.

Furnished by the coöperation of Professor Dr. J. F. Julius Schmidt, Director of the Royal Observatory at Athens.

STATIONS.	Barometer: Corrected for instrum'tal error and temperature. Inches.	Barometer: Corrected for instrum'tal error and temperature. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Athens			30.24	768.0	61.2	16.2		S										Dusty	

Note.—The originals give the barometer corrected, but not reduced to sea-level; occasionally the kind of clouds; the weather as published. They omit the humidity, wind-force, amount of cloudiness and rain-fall.

ITALIAN SERIES.

Furnished by the coöperation of His Excellency the Minister of Agriculture, Industry and Commerce, and the respective Observers.

STATIONS.	Barometer: Corrected for instrum'tal error and temperature. Inches.	Barometer: Corrected for instrum'tal error and temperature. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Udine			29.94	760.5	50.7	10.4	73	Calm	0	0			10			0.008	0.2	Light rain	Prof. Giovanni Codig.
Stelvio	21.98	558.2	30.08	764.0	23.4	— 4.8		W			2		10			0	0		Signora Ernesta Manfredi.
Valdobbia	22.03	559.5	30.08	763.9	26.1	— 3.3	95	NNE			2		10					Snowing	Ab. Dom. Mongini.
Padua			29.94	760.5	46.6	8.1	96	NNW	4.9	2.2			10			0.087	2.2	Raining	Prof. Dott. Lorenzoni.
Vicenza			29.96	760.9	48.9	9.4	89	S	0	0			10			0	0		Conte Alm. Da Schio.
Verona			29.96	760.9	47.7	8.7	90	E			2		10			0	0		Dott. B. Bertoncelli.
Bergamo	28.62	726.9	29.98	761.5	45.3	7.4	80	SW			1		6			0	0		Prof Trionfini Carlo.
Domodossola			30.01	762.2	41.4	5.2	94	Calm			0		10			0.58	14.8	Raining	Prof. Giuseppe Calzia.
Milan			30.01	762.3	43.7	6.5	94	NW			1		10	NW		0.028	0.7	Light rain	Ab. Gio. Capelli.
Pavia			30.00	761.9	43.2	6.2	92	SW			1		10			0.17	4.4	Raining	Prof. Gio. Cantoni.
Moncalieri			30.01	762.3	45.3	7.4	84	ENE	0	0			9	NW		0	0		Prof. P. F. Denza.
Mondovi	28.05	712.4	30.02	762.6	42.1	5.6	89	W			2		10			0.14	3.7	Raining	Prof. D. C. Bruno.
Porto Maurizio			29.93	760.2	55.6	13.1	57	ENE			2		8			0.47	12.0	Raining	Prof. L. Vassallo.
Genoa			29.92	760.0	50.4	10.2	67	NE	8.7	3.9			10	S		1.16	29.5	Raining	Prof. G. M. Garibaldi.
Piacenza			30.00	762.1	42.8	6.0	94	NW	8.1	3.6			10			0.07	2.0	Raining	Dott. G. Manzi.
Parma			30.00	762.1	43.9	6.6	97	W			4		10			0.02	0.7	Light rain	Prof. P. Pigorini.
Florence			29.91	759.8	53.6	12.0	91	NE			2		10	SE		0.06	1.5	Raining	Cav. F. Meucci.
Leghorn			29.88	758.9	53.1	11.7	81	ENE	8.7	3.9			10	SE		0.028	0.7	Light rain	Prof. P. Monte.
Siena	28.67	728.3	29.91	759.6	50.5	10.3	82	ESE	1.8	0.8			10	S		0.10	2.6	Raining	Prof. L. Toscani.
Urbino	28.37	720.7	29.97	761.2	46.4	8.0	89	NNE			2					0	0		Prof. P. Serpieri.
Pesaro			29.97	761.2	45.1	7.3	93	NW	13.0	5.8			10	NW		0	0		Prof. Luigi Guidi.
Ancona			30.01	762.2	48.2	9.0	76	NW			2		7			0	0		Prof. F. De— Bosis.
Grosseto			29.91	759.8	56.5	13.6	81	E			2		8	SE		0.61	15.6	Raining	Avv. P. Ponticelli.
Rome			29.90	759.4	61.5	16.4	69	S	12.5	5.6			4	SE		0.59	15.2	Thunder-storm	Prof's. P. Secchi & L. Respighi.
Naples, O. U.			29.95	760.7	63.5	17.5	74	SSW			4		1			0	0		Prof. L. Palmieri.
Lecce			30.10	764.4	61.2	16.2	75	SSE	24.8	11.1			5			0	0		Prof. C. De—Giorgi.
Cosenza			30.01	762.3	60.8	16.0	75	SW	1.8	0.8			4			0	0		Prof. F. D. Conti.
Cagliari																			Prof. A. Pacinotti.
Riposto, (Sicily)			29.94	760.4	60.4	15.8	87	ENE			2		5			0	0		Prof. F. Cafiero.
Palermo			29.91	759.6	65.3	18.5	52	WSW	3.1	1.4			6			0	0		Prof. G. Cacciatore.
Caltanissetta	28.00	711.1	29.98	761.5	54.1	12.3	67	ESE			2		2	SW		0	0		Prof. A. Pagani.
Siracusa			29.92	759.9	61.9	16.6	89	NE			2		10	SSW		0	0		Prof. V. Giuliano.
Sub-Series.																			
Naples, S. R.			29.97	761.2	59.2	15.1	80	NE	1.3	0.6			3	NW		0	0		Prof. F. Brioschi

Note.—The originals give the wind-force by the scale 0 to 4, or the velocity in kilometers per hour; generally, no distinction between upper and lower clouds; occasionally the weather by the Vienna symbols. The elevation of Stelvio is 2,543.0 meters, or 8,342.9 feet; Valdobbia, 2,548.0 meters or 8,359.3 feet; Bergamo, 379.8 meters, or 1,245.3 feet; Mondovi, 556 meters, or 1,824.2 feet; Urbino, 451 meters, or 1,479.7 feet; Siena, 348.5 meters, or 1,143.3 feet; Caltanissetta, 570.3 meters, or 1,871.0 feet.

JAPANESE SERIES.

STATIONS.	Barometer: Corrected for instrum'tal error and temperature. Inches.	Barometer: Corrected for instrum'tal error and temperature. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Tokei																			

MEXICAN SERIES.

By authority of the Secretary of Public Works.

Furnished by the coöperation of Senor Mariano Barcena, Director of the Central Meteorological Observatory in the City of Mexico.

STATIONS.	Barometer: Corrected for instrum'tal error and temperature. Inches.	Barometer: Corrected for instrum'tal error and temperature. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Mexico																			Mariano Barcena. Vicente Reyes. Miguel Perez. (Engineers in charge.)

Note.—The elevation of Mexico is 2,290 meters, or 7,512.9 feet. The rain-fall is measured at 6 a. m., local time.

NETHERLANDS' SERIES.

Furnished by the cooperation of Professor Buys Ballot, Director of the Royal Meteorological Institute of the Netherlands at Utrecht.

STATIONS.	Barometer: Corrected for instrum'tal error and temperature. Inches.	Barometer: Corrected for instrum'tal error and temperature. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Flushing			29.47	748.5	46.8	8.2		SSW			5					0.070	2.0		
Groningen			29.39	746.5	44.4	6.9		S			6					0.138	3.5		
Helder			29.40	746.7	46.0	7.8		SSW			4					0.008	0.2		
Utrecht			29.44	747.7	46.9	8.3	79	SSW			4		8			0.106	2.7	Very cloudy	

Note.—The originals give the wind-pressure in kilograms per square meter; for Utrecht, they give the weather as published, from which the amount of cloudiness is taken by the scale 0 to 4, without distinguishing between upper and lower clouds. It is assumed that the barometer readings have been reduced to sea-level.

NORWEGIAN SERIES.

Furnished by the coöperation of Professor H. Mohn, Director of the Royal Norwegian Meteorological Institute at Christiania.

STATIONS.	Barometer: Corrected for instrum'tal error and temperature. Inches.	Barometer: Corrected for instrum'tal error and temperature. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Bergen			29.15	740.5	32.7	0.4	89	WSW	2.5	1.1			10			0.039	1.0	Raining	
Brönö			29.49	749.1	11.1	—11.6	64	ENE	8.9	4			1						
Christiania			29.44	747.7	14.4	— 9.8	87	NE	5.1	2.3			10			0.472	12.0		
Tromsö			29.51	749.6	14.0	—10.0	48	SE	17.9	8			0			0	0		

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols. The cloudiness and weather at Bergen refer to 2h., p. m., local time, instead of 1h., 4 min.

PORTUGUESE SERIES.

Furnished by the coöperation of J. C. de Brito Capello, Director of the Meteorological Observatory of the Infante Don Luiz at Lisbon.

STATIONS.	Barometer. Corrected for instrum't'al error and temperature. Inches.	Barometer. Corrected for instrum't'al error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Angra, (Azores)	.....	.....	29.48	748.9	56.8	13.8	63	W	27.3	12.2	.....	.....	8	.....	.....	0.213	5.4	.....	Dr. J. A. Sampaio.
Campo Major	.....	.....	29.75	755.6	55.6	13.1	95	SSW	20.6	9.2	.....	.....	10	SSW	.....	0.311	7.9	Raining	Dr. A. M. R. dos Santos.
Funchal, (Madeira)	.....	.....	30.01	762.3	66.6	19.2	72	WSW	13.0	5.8	.....	.....	9	.....	.....	0.134	3.4	Raining	Capt. D. A. de Cunha.
Lisbon	.....	.....	29.70	754.3	59.7	15.4	99	S	33.6	15.0	.....	.....	10	.....	.....	0.898	22.8	Raining	The Observatory.
Ponta Delgada, (Azores)	.....	.....	29.60	751.7	60.8	16.0	71	W	14.3	6.4	.....	.....	4	.....	.....	0.343	8.7	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

NOTE.—The originals give the wind-velocity in kilometers per hour; occasionally, the weather by the Vienna symbols; the amount of cloudiness without distinguishing between upper and lower clouds; the barometer corrected but not reduced to sea-level. The rain-fall at Lisbon is measured at noon, instead of 0 h. 6 m., p. m.

RUSSIAN SERIES.

Furnished by the cooperation of Professor H. Wild, Director of the Imperial Central Physical Observatory of Russia, at St. Petersburg.

Warsaw	.....	.....	29.86	758.5	41.4	5.2	87	ESE	7	3	.....	.....	1	.....	.....	.....	.....	.....	Astronomical Obs.
Wilna	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Astronomical Obs.
Dorpat	.....	.....	29.72	755.0	34.3	1.3	98	WSW	9	4	.....	.....	10	.....	.....	.....	.....	.....	Physical Cabinet.
St. Petersburg	.....	.....	29.70	754.3	14.5	— 9.7	92	ENE	4	2	.....	.....	10	.....	.....	.....	.....	.....	Central Physical Obs.
Kuopio	.....	.....	29.67	753.7	— 1.5	—18.6	100	E	18	8	.....	.....	10	.....	.....	.....	.....	.....	Ch. Forsten.
Kieff	.....	.....	30.04	763.0	37.6	3.1	88	SSW	7	3	.....	.....	7	.....	.....	.....	.....	.....	Physical Cabinet.
Nikolaiev	.....	.....	30.17	766.3	44.6	7.0	99	S	13	6	.....	.....	10	.....	.....	.....	.....	.....	Kurdakof.
Kertch	.....	.....	30.27	768.9	44.6	7.0	91	SSE	2	1	.....	.....	10	.....	.....	.....	.....	Foggy	Lagorio.
Moscow	.....	.....	29.87	758.6	33.8	1.0	92	SSW	9	4	.....	.....	10	.....	.....	.....	.....	.....	Meteorological Obs.
Lugan	.....	.....	30.24	768.2	38.3	3.5	87	NE	2	1	.....	.....	1	.....	.....	.....	.....	.....	Meteorological Obs.
Archangel	.....	.....	29.97	761.1	—18.8	—28.2	86	E	7	3	.....	.....	4	.....	.....	.....	.....	.....	Ogorodnikof.
Tiflis	29.15	740.5	30.05	778.4	38.7	3.7	85	Calm	0	0	.....	.....	10	.....	.....	.....	.....	.....	Physical Observatory.
Astrakhan	.....	.....	30.54	775.7	36.7	2.6	91	SE	7	3	.....	.....	10	.....	.....	.....	.....	.....	Sebastianof.
Kasan	.....	.....	29.87	758.6	34.2	1.2	92	WSW	20	9	.....	.....	10	.....	.....	.....	.....	.....	Physical Cabinet.
Orenburg	.....	.....	30.76	781.4	—17.5	—27.5	.....	S	13	6	.....	.....	0	.....	.....	.....	.....	.....	Tschernischef.
Ekaterinburg	29.05	737.8	30.08	764.0	8.4	—13.1	85	SSW	18	8	.....	.....	10	.....	.....	.....	.....	.....	Meteorogical Obs.
Nukuss	.....	.....	30.93	785.7	19.0	— 7.2	78	ESE	4	2	.....	.....	0	.....	.....	.....	.....	.....	
Kasaly	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Bobrof.
Tashkend	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Michelson.
Barnaul	.....	.....	31.04	788 5	—21.1	—29.5	79	Calm	0	0	.....	.....	0	.....	.....	.....	.....	.....	Meteorological Obs.
Yeniseisk	.....	.....	30.42	772.6	— 6.2	—21.2	67	WSW	7	3	.....	.....	0	.....	.....	.....	.....	.....	Marks.
Irkutsk	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Usolzef.
Peking, (China)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Physical Observatory.
Nertchinsk	28.19	715.9	30.53	775.4	18.9	— 7.3	69	Calm	0	0	.....	.....	0	.....	.....	.....	.....	.....	Meteorological Obs.
Vladivostock	.....	.....	30.52	775.1	— 6.3	—21.3	96	Calm	0	0	.....	.....	2	.....	.....	.....	.....	.....	
Nikolaievsk, on the Amoor	.....	.....	30.05	763.3	7.3	—13.7	75	Calm	0	0	.....	.....	6	.....	.....	.....	.....	Snowing	
.....	.....	.....	.....	.....	30.7	— 0.7	.....	E	7	3	.....	.....	10	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

NOTE.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols; they omit the rain-fall. The elevation of Tiflis is 409 meters, or 1,341.8 feet; Ekaterinburg, 306. 4? m., or 1,005.2? ft.; Tashkend, 494.2? m., or 1,621.3? ft.; Irkutsk, 392 m., or 1,286 ft.; Nertchinsk, 592.0? m., or 1,942.2? ft.; Oorga, 1,281.0? m., or 4,202.6? ft.

SPANISH SERIES.

Furnished by the coöperation of Antonio Aguilar, Director of the Royal Observatory at Madrid, and of Don Cecilio Pujazon, Captain R. N. Director of the Naval Observatory at San Fernando.

Madrid	.....	.....	29.93	760.1	43.0	6.1	92	S	9.7	4.34	.....	.....	10	.....	.....	0.020	0.5	Rainy	Royal Observatory.
San Fernando	.....	.....	29.98	761.6	58.3	14.6	94	S	15.9	7.1	.....	.....	10	.....	S	0.60	15.3	Raining	Naval Observatory.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

NOTE.—The originals give the weather in general terms, as published; rain-fall for San Fernando from preceding to following midnight; wind-velocity for Madrid in kilometers per hour.

SWEDISH SERIES.

Furnished by the coöperation of Professor R. Rubenson, Director of the Royal Swedish Meteorological Institute, at Stockholm, and of Dr. H. H. Hildebrandsson, Chief of the Meteorological Division of the Upsala Observatory.

Haparanda	.....	.....	29.74	755.3	0.0	—17.8	89	E	.....	.....	2	.....	10	.....	.....	.....	.....	Snowing	
Umea	.....	.....	29.60	751.9	0.3	—17.6	89	NNE	.....	.....	2	.....	10	.....	.....	0	0	.....	
Hernosand	.....	.....	29.59	751.6	2.5	—16.4	95	NNE	.....	.....	2	.....	10	.....	.....	0.098	2.5	Snowing	
Stockholm	.....	.....	29.49	749.1	23.7	— 4.6	100	Calm	.....	.....	0	.....	10	.....	.....	0.039	1.0	.....	
Wisby	.....	.....	29.61	752.1	38.5	3.6	97	S	.....	.....	4	.....	10	.....	.....	0.173	4.4	.....	
SUB-SERIES.																			
Upsala	.....	.....	29.52	749.7	16.7	— 8.5	98	NE	2.9	1.3	.....	.....	10	.....	.....	0.136	3.44	Snowing	Dr. Hildebrandsson.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

NOTE.—The originals give the wind-force by the scale 0 to 6, and Upsala also velocity in meters per second; occasionally, the weather by the Vienna symbols, or in general terms; no distinction between the amount of upper and lower clouds. The rain-fall is measured at 8 a. m., local time.

SWISS SERIES.

Furnished by the coöperation of Professor R. Wolf, Director of the Observatory at Zurich, and of Professor E. Plantamour, Director of the Observatory at Geneva.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'r 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Geneva	28.39	721.1	29.82	757.4	53.6	12.0	55	S	.....	.....	2	.....	0	.....	.....	0.016	0.4	Clear	The Observatory.
Zurich	28.20	716.3	29.86	758.5	47.3	8.5	72	SE	.....	.....	1	.....	1	.....	.....	0	0	Clear	The Observatory.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—For Geneva the corresponding departures from the normal values are: Barometer, —6.6 mm; Thermometer, +10.6 cent.; Relative Humidity, —25 per cent.

NOTE.—The rain-fall is measured at Zurich at 7 a. m. on the following day. The originals give the barometer corrected but not reduced to sea-level; the wind-force by the scale 0 to 4 for Zurich; the amount of cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The elevation of Geneva is 408 meters, or 1,339 feet, and that of Zurich 470 meters, or 1,542 feet.

TURKISH SERIES.

Furnished by the coöperation of A. Coumbary, Effendi, Director of the Central Observatory at Constantinople, and of Professor C. V. A. Van Dyck, Superintendent of the Lee Observatory at Beirut.

Constantinople	.....	.....	30.27	768.8	59.7	15.4	59	SSE	8	3.5	.....	.....	7	.....	SW	0	0	.....	
Fao, (Persian Gulf)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Salonica	.....	.....	30.24	768.2	59.0	15.0	.....	W	.....	.....	1	.....	10	.....	.....	.....	.....	.....	
Valona	.....	.....	30.11	764.7	62.2	16.8	.....	S	.....	.....	3	.....	5	.....	.....	.....	.....	.....	
Varna	.....	.....	30.08	764.0	53.6	12.0	.....	N	.....	.....	2	.....	10	.....	.....	.....	.....	.....	
SUB-SERIES.																			
Beirut, (Syria,) Lee Obs'y	.....	.....	30.26	768.7	66.9	19.4	71	W	.....	.....	1	.....	1c	.....	.....	0	0	Blue sky	Prof. C. V. A. Van Dyck.

NOTE.—The originals give the wind-force by the scale 0 to 7, (except Beirut, by the scale 0 to 12, and Constantinople velocity in meters per second;) the weather in general terms as published; no distinction between upper and lower clouds, and, except Constantinople and Beirut, the amount by the scale 0 to 4. It is assumed that the barometer is reduced to sea-level.

CANADIAN SERIES.

Furnished by the coöperation of Professor G. T. Kingston, Director of the Magnetic Observatory at Toronto, and Superintendent of the Meteorological Office of the Dominion of Canada, and the respective Observers. Those marked with a star (*) are also telegraphed daily to the office of the Chief Signal Officer, U. S. Army.

Bathurst, N. B	.....	.....	30.17	766.3	— 5.5	—20.8	81	W	3	1.3	.....	.....	0	.....	.....	0	0	.....	Hon. J. Ferguson.
Brockville, Ontario	.....	.....	30.14	765.5	18	— 7.8	.....	Calm	0	0	.....	.....	10s	.....	SW	0	0	Cloudy	W. R. Bigg.
*Chatham, N. B	.....	.....	30.24	768.1	—10	—23.3	100	Calm	0	0	.....	5ck	0	.....	.....	0	0	Fair	G. A. Blair.
Charlottetown, P. E. Island	.....	.....	30.23	767.8	8	—13.3	84	Calm	0	0	.....	5cs	0	.....	.....	0	0	Fair	H. J. Cundall, C. E.
Cornwall, Ontario	.....	.....	30.15	765.8	5.9	—14.5	83	W	.....	.....	1	.....	10s	.....	.....	0	0	Threatening	James Smith, M. A.
Dalhousie, N. B	.....	.....	30.11	764.8	.....	.....	.....	W	.....	.....	1	.....	.....	.....	.....	0	0	Clear	H. A. Johnson.
Esquimault, B. C	.....	.....	30.28	769.1	48.3	9.1	93	SW	.....	.....	.....	2ck	0	W	.....	0	0	Clear	W. H. Bevis.
Fredericton, N. B	.....	.....	30.32	770.1	— 1.9	—18.8	97	W	4	1.8	.....	2cs	0	.....	.....	0	0	Clear	Prof. Harrison.
*Fort Garry, Manitoba	.....	.....	29.51	749.5	4	—15.6	97	E	16	7.2	.....	.....	10n	.....	.....	0.082	2.08	Light snow	James Stewart.
Goderich, Ontario	.....	.....	30.00	762.0	20.7	— 6.3	84	Calm	.....	.....	0	10k	0	N	.....	0	0	Dull	H. J. Strang, M. A.
Granton, Ontario	28.90	734.0	30.07	763.8	23.2	— 4.9	.....	SW	.....	.....	1	.....	10n	.....	.....	0	0	Cloudy	James Grant.
*Halifax, N. S	.....	.....	30.34	770.6	17	— 8.3	91	W	8	3.6	.....	0	2s	.....	.....	0	0	Fair	F. Allison, M. A.
Hamilton, Ontario	.....	.....	30.12	765.0	24.7	— 4.1	83	Calm	.....	.....	0	.....	9n	.....	.....	0	0	Fair	G. Dickson.
Heart's Content, N. F	.....	.....	29.90	759.4	34.0	1.1	100	NW	.....	.....	2	.....	10	.....	.....	0.01	0.3	Overcast	E. Weedon.
*Kingston, Ontario	.....	.....	30.17	766.3	19	— 7.2	87	S	.....	.....	4	.....	10s	.....	.....	0.06	1.5	Cloudy	S. Woods, M. A.
*Montreal, Quebec	.....	.....	30.17	766.3	6	—14.4	76	S	12	5.4	.....	.....	10n	.....	.....	0	0	Cloudy	C. H. McLeod, C. E.
*Ottawa, Ontario	.....	.....	30.14	765.5	8	—13.3	84	E	8	3.6	.....	.....	10n	.....	E	0	0	Threatening	J. B. Haney.
*Parry Sound, Ontario	.....	.....	30.01	762.2	21	— 6.1	85	S	5	2.2	.....	.....	10n	.....	S	0	0	Cloudy	Rev. R. Mosley.
Port Dover, Ontario	.....	.....	30.11	764.8	24	— 4.4	87	SW	6	2.7	.....	5k	0	W	.....	0	0	Fair	H. Morgan.
Port Hastings, N. S	.....	.....	30.22	767.6	15.8	— 9.0	.....	NW	6	2.7	.....	.....	.....	.....	.....	0	0	Fine	Peter Grant.
Port Stanley, Ontario	.....	.....	30.10	764.5	24	— 4.4	91	S	2	0.9	.....	5k	0	S	.....	0	0	Clear	M. Payne.
*Quebec, Quebec	.....	.....	30.26	768.6	3	—16.1	73	Calm	0	0	.....	.....	8n	.....	.....	0	0	Cloudy	Capt. Ashe, R. N.
*Rockliffe, Ontario	.....	.....	30.04	763.0	15	— 9.4	93	E	10	4.5	.....	.....	10s	.....	E	0	0	Cloudy	
St. John, N. B	.....	.....	30.34	770.6	4	—15.6	100	,	2	0.9	.....	0	0	.....	.....	0	0	Clear	G. Murdoch, C. E.
*Saugeen, Ontario	.....	.....	30.02	762.5	23	— 5.0	86	SW	6	2.7	.....	.....	10n	.....	.....	0	0	Cloudy	K. Stewart.
Stayner, Ontario	.....	.....	30.08	764.0	6	—14.4	97	Calm	0	0	.....	2c	0	.....	.....	0	0	Fair	R. J. Cole.
Stratford, Ontario	28.72	729.5	30.08	764.0	22.0	— 5.6	92	SW	4	1.8	.....	.....	10s	.....	.....	0	0	Cloudy	C. J. MacGregor, M. A.
*Sydney, C. B	.....	.....	30.18	766.6	24	— 4.4	87	NW	4	1.8	.....	10k	0	NW	.....	0	0	Cloudy	T. C. Hill.
*Toronto, Ontario	.....	.....	30.11	764.8	25	— 3.9	81	W	5	2.2	.....	.....	10n	.....	.....	0	0	Cloudy	Magnetic Observatory.
Woodstock, Ontario	.....	.....	30.11	764.8	24.6	— 4.1	95	W	7	3.1	.....	.....	10s	.....	.....	0	0	Cloudy	J. Montgomery.
SUB-SERIES.																			
St. Johns, Newfoundland	.....	.....	.....	.....	33.0	0.6	100	SW	.....	.....	.....	10	10	.....	.....	0.03	0.8	Hazy	John Delany.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—The originals for Brockville, Charlottetown, Port Dover, Port Stanley, St. Johns, N. F., Stayner and those telegraphed, give the amount of cloudiness by the scale 0 to 4. The elevation of Granton is 1,015 feet, or 309.4 m.; Stratford, 1,182 feet, or 360.3 m.

UNITED STATES SERIES.

Furnished by the coöperation of Bvt. Brig. Gen. Albert J. Myer, Chief Signal Officer, U. S. Army.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Albany, N. Y.	.....	.....	30.26	768.6	— 3	—19.4	83	Calm	0	0	.....	5c	Haze	.....	.....	0	0	Fair	
Alpena, Mich.	.....	.....	29.99	761.7	22	— 5.6	72	SW	4	1.8	.....	.....	10s	.....	.....	0	0	Cloudy	
Atlantic City, N. J.	.....	.....	30.29	769.4	25	— 3.9	100	S	2	0.9	.....	10cs	0	SW	.....	0	0	Cloudy	
Augusta, Ga.	.....	.....	29.96	761.0	39	3.9	91	NE	4	1.8	.....	.....	10n	.....	NE	0.15	3.8	Light rain	
Baltimore, Md.	.....	.....	30.29	769.4	20	— 6.7	85	Calm	0	0	.....	Haze	5s	.....	.....	0	0	Cloudy	
Barnegat, N. J.	.....	.....	30.29	769.4	24	— 4.4	93	NW	2	0.9	.....	10k	0	W	.....	0	0	Cloudy	
Bismarck, Dakota	27.97	710.4	29.73	755.1	11	—11.7	79	NW	4	1.8	.....	0	5s	.....	NW	0.19	4.8	Fair	
Boston, Mass.	.....	.....	30.32	770.1	14.5	— 9.7	73	SW	3	1.3	.....	4cs	Sm'e	W	.....	0	0	Fair	
Breckenridge, Minn.	.....	.....	29.66	753.4	24	— 4.4	87	SE	16	7.2	.....	.....	10s	.....	SE	0	0	Cloudy	
Buffalo, N. Y.	.....	.....	30.07	763.8	28	— 2.2	67	SW	7	3.1	.....	8ck	Sm'e	W	.....	0	0	Fair	
Burlington, Vt.	.....	.....	30.22	767.6	12	—11.1	79	S	2	0.9	.....	.....	10s	.....	.....	0	0	Cloudy	
Cairo, Ill.	.....	.....	29.96	761.0	37	2.8	90	SE	2	0.9	.....	.....	10n	.....	.....	0.20	5.1	Light rain	
Cape Hatteras, N. C.	.....	.....	30.10	764.5	46	7.8	92	E	9	4.0	.....	.....	10n	.....	.....	0.01	0.3	Light rain	
Cape Henry, Va.	.....	.....	30.23	767.8	34	1.1	90	NE	10	4.5	.....	10k	0	SW	.....	0	0	Cloudy	
Cape Lookout, N. C.	.....	.....	30.11	764.8	47	8.3	100	SE	4	1.8	.....	.....	10n	.....	SE	0.25	6.3	Light rain	
Cape May, N. J.	.....	.....	30.25	768.3	32	0.0	79	SE	7	3.1	.....	.....	10s	.....	SW	0	0	Cloudy	
Charleston, S. C.	.....	.....	29.93	760.2	51	10.6	93	E	17	7.6	.....	.....	10n	.....	.....	0.22	5.6	Light rain	
Cheyenne, Wyoming	23.94	608.1	29.88	758.9	33	0.6	79	W	8	3.6	.....	0	1s	.....	.....	0	0	Clear	
Chicago, Ill.	.....	.....	29.96	761.0	27	— 2.8	77	Calm	0	0	.....	.....	Fog	.....	.....	0	0	Foggy	
Cincinnati, Ohio.	.....	.....	29.99	761.7	32	0.0	79	SE	1	0.4	.....	.....	10s	.....	SW	0	0	Cloudy	
Cleveland, Ohio.	.....	.....	30.08	764.0	29	— 1.7	67	SE	8	3.6	.....	.....	10s	.....	SW	0	0	Cloudy	
Corsicana, Tex.	.....	.....	30.01	762.2	38	3.3	80	NW	10	4.5	.....	0	5s	.....	.....	0	0	Fair	
Davenport, Iowa	.....	.....	30.02	762.5	12	—11.1	90	Calm	0	0	.....	.....	Fog	.....	.....	0	0	Foggy	
Denison, Tex.	.....	.....	30.00	762.0	34	1.1	79	NW	6	2.7	.....	.....	10s	.....	.....	0	0	Cloudy	
Denver, Col.	24.73	628.1	29.95	760.7	32	0.0	79	S	4	1.8	.....	0	2s	.....	.....	0	0	Clear	
Detroit, Mich.	.....	.....	30.04	763.0	24	— 4.4	74	Calm	0	0	.....	.....	10s	.....	.....	0	0	Cloudy	
Dodge City, Kan.	27.26	692.4	29.90	751.8	33	0.6	89	NW	20	8.9	.....	0	5s	.....	NW	0	0	Fair	
Dubuque, Iowa.	.....	.....	29.96	761.0	22	— 5.6	86	SW	1	0.4	.....	.....	10s	.....	.....	0	0	Cloudy	
Duluth, Minn.	.....	.....	29.81	757.2	25	— 3.9	88	Calm	0	0	.....	.....	10s	.....	.....	0	0	Cloudy	
Eastport, Me.	.....	.....	30.31	769.9	8	—13.3	78	W	4	1.8	.....	5c	2s	W	.....	0	0	Fair	
Erie, Pa.	.....	.....	30.06	763.5	31	— 0.6	79	S	8	3.6	.....	5cs	Haze	.....	.....	0	0	Hazy	
Escanaba, Mich.	.....	.....	29.96	761.0	16	— 8.9	74	SW	4	1.8	.....	.....	10s	.....	.....	0	0	Cloudy	
Fort Gibson, Indian Ter.	.....	.....	29.94	760.5	31	— 0.6	89	N	4	1.8	.....	.....	Fog	.....	.....	0.07	1.8	Foggy	
Ft. St. Michael, Alaska.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Fort Sill, Indian Ter.	28.75	730.5	29.92	760.0	30	— 1.1	59	S	2	0.9	.....	2c	0	.....	.....	0	0	Fair	
Fort Sully, Dakota.	28.12	714.2	29.82	757.4	32	0.0	79	Calm	0	0	.....	0	0	.....	.....	0.02	0.5	Clear	
Florence, Arizona.	28.52	724.4	30.08	764.0	44	6.7	.....	SE	.....	.....	.....	0	0	.....	.....	0	0	Clear	
Galveston, Tex.	.....	.....	30.02	762.5	44	6.7	75	NW	14	6.3	.....	.....	10s	.....	NW	0	0	Cloudy	
Grand Haven, Mich.	.....	.....	29.98	761.5	25	— 3.9	88	SE	4	1.8	.....	.....	10s	.....	.....	0	0	Cloudy	
Indianapolis, Ind.	.....	.....	29.98	761.5	32	0.0	79	SE	1	0.4	.....	0	5s,sm'	.....	.....	0	0	Fair	
Indianola, Tex.	.....	.....	30.08	764.0	37	2.8	80	NW	7	3.1	.....	0	0	.....	.....	0	0	Clear	
Jacksonville, Fla.	.....	.....	29.87	758.7	60	15.6	94	NE	13	5.8	.....	.....	10n	.....	.....	0.94	23.9	Light rain	
Keokuk, Iowa.	.....	.....	29.95	760.7	16	— 8.9	83	NE	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Key West, Fla.	.....	.....	29.95	760.7	70	21.1	95	SE	12	5.4	.....	.....	10n	.....	.....	0.05	1.3	Light rain	
Kittyhawk, N. C.	.....	.....	30.22	767.6	40	4.4	91	Calm	0	0	.....	.....	10s	.....	.....	0	0	Cloudy	
Knoxville, Tenn.	.....	.....	30.00	762.0	32	0.0	89	NE	9	4.0	.....	.....	10n	.....	NW	0.15	3.8	Light snow	
La Crosse, Wis.	.....	.....	29.93	760.2	24	— 4.4	74	S	11	4.9	.....	.....	10s	.....	S	0	0	Cloudy	
Leavenworth, Kan.	.....	.....	29.95	760.7	26	— 3.3	88	SW	4	1.8	.....	.....	10s	.....	.....	0	0	Cloudy	
Louisville, Ky.	.....	.....	30.01	762.2	32	0.0	79	Calm	0	0	.....	.....	10s	.....	.....	0	0	Cloudy	
Lynchburg, Va.	.....	.....	30.21	767.3	23	— 5.0	72	Calm	0	0	.....	.....	10s	.....	.....	0	0	Cloudy	
Malone, N. Y.	.....	.....	30.12	765.0	21	— 6.1	85	SE	4	1.8	.....	.....	10s	.....	SE	0	0	Cloudy	
Marquette, Mich.	.....	.....	29.91	759.7	26	— 3.3	64	NW	4	1.8	.....	.....	10s	.....	.....	0	0	Cloudy	
Memphis, Tenn.	.....	.....	29.92	760 0	37	2.8	100	Calm	0	0	.....	.....	10n	.....	.....	0.15	3.8	Light rain	
Milwaukee, Wis.	.....	.....	30.01	762.2	18	— 7.8	100	NW	2	0.9	.....	.....	Fog	.....	.....	0	0	Dense fog	
Mobile, Ala.	.....	.....	29.84	757.9	44	6.7	92	NW	2	0.9	.....	.....	10s	.....	.....	0.28	7.1	Cloudy	
Montgomery, Ala.	.....	.....	29.87	758.7	39.5	4.2	95	NE	5	2.2	.....	.....	10n	.....	.....	0.41	10.4	Light rain	
Morgantown, W. Va.	25.02	757.1	30.16	765.8	21	— 6.1	70	Calm	0	0	.....	5c	S n'e	SW	.....	0	0	Fair	
Mt. Washington, N. H.	23.64	600.4	30.00	762.0	10	—12.2	100	NW	48	21.5	.....	.....	Fog	.....	.....	0	0	Foggy	
Nashville, Tenn.	.....	.....	29.94	760.5	36	2.2	90	Calm	0	0	.....	.....	10n	.....	.....	0.14	3.6	Light rain	
New Haven, Conn.	.....	.....	30.32	770.1	11	—11.7	79	Calm	0	0	.....	2cs	Fog	.....	.....	0	0	Fair	
New London, Conn.	.....	.....	30.33	770.4	8	—13.3	78	N	4	1.8	.....	5ck	2s	W	W	0	0	Cloudy	
New Orleans, La.	.....	.....	29.85	758.2	47	8.3	85	Calm	0	0	.....	.....	10s	.....	.....	0.14	3.6	Cloudy	
Newport, R. I.	.....	.....	30.34	770.6	18	— 7.8	67	S	2	0.9	.....	2c	0	W	.....	0	0	Clear	
New York, N. Y.	.....	.....	30.33	770.4	23	— 5.0	86	Calm	0	0	.....	.....	Fog	.....	.....	0	0	Foggy	
Norfolk, Va.	.....	.....	30.22	767.6	35	1.7	80	NE	6	2.7	.....	.....	10s	.....	.....	0	0	Cloudy	
North Platte, Neb.	26.91	683.5	29.51	749.5	34	1.1	80	W	12	5.4	.....	0	5ks	.....	W	0.07	1.8	Fair	
Omaha, Neb.	28.72	729.5	29.83	757.7	31	— 0.6	95	S	8	3.6	.....	.....	Fog	.....	.....	0	0	Foggy	
Oswego, N. Y.	.....	.....	30.16	766.1	21	— 6.1	85	SE	8	3.6	.....	.....	Haze	.....	.....	Inap.	Inap.	Cloudy	
Pembina, Dakota.	.....	.....	29.40	746.7	15	— 9.4	91	S	24	10.7	.....	.....	10s	.....	S	0	0	Cloudy	
Philadelphia, Pa.	.....	.....	30.30	769.6	13	—10.6	80	E	9	4.0	.....	2c	5s	SW	.....	0	0	Cloudy	
Pike's Peak, Col.	17.03	447.8	29.84	757.9	5	—13.3	77	N	16	7.2	.....	5cs	1s	N	.....	0.04	1.0	Fair	
Pittsburgh, Pa.	.....	.....	30.14	765.5	18	— 7.8	84	SE	1	0.4	.....	.....	Fog	.....	.....	0	0	Foggy	
Port Huron, Mich.	.....	.....	30.06	763.5	22	— 5.6	86	Calm	0	0	.....	.....	10s	.....	.....	0	0	Cloudy	
Portland, Me.	.....	.....	30.30	769.6	6	—14.4	76	Calm	0	0	.....	2c	Haze	.....	.....	0	0	Fair	
Portland, Oregon.	.....	.....	30.28	769.1	49	9.4	100	W	1	0.4	.....	.....	10n	.....	.....	0.01	0.3	Light rain	
Punta Rassa, Fla.	.....	.....	29.91	759.7	65.0	18.3	94	S	12	5.4	.....	.....	10n	.....	.....	0.31	20.6	Light rain	
Rochester, N. Y.	.....	.....	30.08	764.0	28	— 2.2	67	SW	9	4.0	.....	.....	10s	.....	SW	0	0	Cloudy	
Salt Lake City, Utah.	25.80	655.3	30.13	765.3	31	— 0.6	89	SE	4	1.8	.....	5c	0	SW	.....	0	0	Fair	
Sandy Hook, N. J.	.....	.....	30.29	769.4	22	— 5.9	72	Calm	0	0	.....	10cs	0	.....	.....	0	0	Cloudy	
San Diego, Cal.	.....	.....	30.00	762.0	61	16.1	86	NE	4	1.8	.....	0	0	.....	.....	0	0	Clear	
San Francisco, Cal.	.....	.....	30.07	763.8	55	12.8	55	N	4	1.8	.....	Haze	Haze	.....	.....	0	0	Hazy	
Santa Fé, N. M.	23.24	590.3	29.78	756.4	28	— 2.5	67	NE	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Savannah, Ga.	.....	.....	29.91	759.7	56	13.3	93	SE	11	4.9	.....	.....	10n	.....	SE	0.45	11.4	Light rain	
Shreveport, La.	.....	.....	29.99	761.7	36	2.2	90	Calm	0	0	.....	.....	10s	.....	.....	0	0	Cloudy	
Smithville, N. C.	.....	.....	30.04	763.0	47	8.3	92	NE	9	4.0	.....	.....	10n	.....	NE	0.14	3.6	Light rain	
Springfield, Mass.	.....	.....	30.33	770.4	6	—14.4	74	Calm	0	0	.....	Haze	0	.....	.....	0	0	Clear	
St. Louis, Mo.	.....	.....	29.95	760.7	35	1.7	80	S	4	1.8	.....	.....	Fog	.....	.....	0.04	1.0	Foggy	
St. Marks, Fla.	.....	.....	29.85	758.2	54	12.2	96	SE	8	3.6	.....	.....	10s	.....	.....	0.25	6.3	Cloudy	
St. Paul, Minn.	.....	.....	29.79	756.7	25	— 3.9	88	SE	6	2.7	.....	.....	10n	.....	.....	0.02	0.5	Light snow	
St. Paul's Island, Alaska.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Thatcher's Island, Mass.	.....	.....	30.33	770.4	16	— 8.9	49	W	4	1.8	.....	1c	0	W	.....	0	0	Clear	
Toledo, Ohio.	.....	.....	30.02	762.5	30	— 1.1	78	Calm	0	0	.....	8k	Haze	SW	.....	0	0	Cloudy	
Tucson, Arizona.	27.64	76.2 0	30.20	767.1	26	— 3.3	.....	S	.....	.....	.....	0	0	.....	.....	0	0	Clear	
Tybee Island, Ga.	.....	.....	29.88	758.9	51	10.6	100	SE	15	6.7	.....	.....	10n	.....	.....	0.53	13.5	Light rain	
Vicksburg, Miss.	.....	.....	29.88	758.9	41	5.0	100	Calm	0	0	.....	.....	Fog	.....	.....	0.79	20.1	Foggy	
Virginia City, M. T.	24.24	615.7	29.72	754.9	38	3.3	85	Calm	0	0	.....	.....	10s	.....	NW	0.04	1.0	Cloudy	
Washington, D. C.	.....	.....	30.26	768.6	18	— 7.8	85	NE	4	1.8	.....	.....	10s,sm'	.....	SW	0	0	Cloudy	
Wilmington, N. C.	.....	.....	30.05	763.3	42	5.6	91	NE	8	3.6	.....	.....	10n	.....	SW	0.10	2.5	Light rain	

UNITED STATES SERIES.—Continued.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Wood's Holl, Mass.	.....	.....	30.36	771.1	21	— 6.1	71	NE	3	1.3	.....	0	5s	.....	NW	0	0	Fair	
Yankton, Dakota	28.46	722.9	29.80	756.9	22	— 5.6	79	Calm	0	0	.....	0	0	.....	.....	0.01	0.3	Clear	
Yuma, Arizona	.....	.....	30.06	763.5	54	12.2	.....	E	.....	.....	.....	0	0	.....	.....	0	0	Clear	
Sub-Series.																			
Kingston, Jamaica, W. I.	.....	.....	30.16	766.1	79	26.1	78	SE	14	6.3	.....	2c	2n	SE	SE	0	0	.....	James Gall.*
Navassa, W. I.	.....	.....	.....	.....	79	26.1	.....	E	.....	.....	4	.....	.....	.....	.....	0	0	Clear	F. M. Everett.
Clifton, Ja., W. I.	27.20	690.9	30.00	762.0	66	18.9	94	S	8.0	3.6	.....	.....	10k	.....	.....	0.15	3.8	Dull	C. Partridge.
Paramaribo, D. Guiana, S.A.	.....	.....	30.08	764.0	80	26.7	83	NE	.....	.....	3	5k	5k	E	.....	0	0	Fair	C. J. Hering.
Batavia, Dutch Guiana, S.A.	30.07	763.8	.....	.....	78.4	25.8	.....	E	.....	.....	.....	.....	.....	.....	.....	0	0	Clear	Dr. H. Groot.
Medellin, Colombia, S. A.	25.22	640.6	.....	.....	63.2	17.3	83	Calm	.....	.....	0	1cs	0	.....	.....	0	0	Fair	Thomas Herran.
York Factory, B. A.	.....	.....	30.05	763.3	—35.0	—37.2	.....	N	6	2.7	.....	0	0	.....	.....	0	0	Clear	J. Fortescue, W. Wood.
Honolulu, Oahu, H. I.	.....	.....	30.05	763.3	73	22.8	95	SE	.....	.....	3	.....	.....	.....	.....	0	0	Clear	Daniel Smith.
Makawao, Maui, H. I.	.....	.....	29.94	760.5	60	15.6	66	Calm	.....	.....	0	0	3k	.....	.....	0	0	.....	F. L. Clarke.

Marine Series.	True course towards.	Hourly rate in knots.	State of ocean.	Direction of swell from—	Weather.	Observer.
Schooner Addie Fuller, Tarpaulin Cove.	.....	.....	.....	.....	Clear	Capt. James Jorgensen.

Note.—The originals give the *cloudiness* by the scale 0 to 4, except York Factory, Medellin and Paramaribo. The elevation of the barometer at Bismarck is 1,677 feet, or 511.1 meters; Cheyenne, 6,057.3 ft., or 1,846.2 m.; Clifton, about 2,892 ft., or 881.5 m.; Denver, 5,135 ft., or 1,565.2 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Florence, 1,550 (?) ft., or 472.5 (?) m.; Makawao, 2,205 ft., or 672.1 m.; Morgantown, 1,027.9 ft., or 313.3 m.; Medellin, 4,876 ft., or 1,486.2 m.; Mt. Washington, 6,285 ft., or 1,915.6 m.; North Platte, 2,846 ft., or 867.4 m.; Omaha, 1,054.6 ft., or 321.4 m.; Pike's Peak, 14,150.7 ft., or 4,313.1 m.; Salt Lake City, 4,362.2 ft., or 1,329.6 m.; Santa Fé, 6,862.2 (?) ft., or 2,091.6 (?) m.; Tucson, 2,513 (?) ft., or 772.1 (?) m.; Virginia City, 5,480 (?) ft., or 1,670.3 (?) m.; Yankton, 1,278 ft., or 389.5 m. The following constants are added in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Denver, 5.22 in.; Makawao, 2.170 in.; Mt. Washington, 6.86 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fé, 6.54 in.; Tucson, 2.59 in.; Virginia City, 5.48 in. The elevation of Batavia is about 6 feet; the barometric readings need the addition of 0.2 mm. or 0.01 in. for reduction to sea-level.

UNITED STATES NAVAL SERIES.

By authority of the **SECRETARY OF THE NAVY.**

Furnished by the coöperation of the Navy Department, through Commodore Daniel Ammen, U. S. N., Chief of Bureau of Navigation.

STATIONS AND VESSELS.	True course toward—	Hourly rate in knots.	*Barometer as reported.		Temperature of the Air.		Relative Humidity.	Wind.			Clouds.				Rain-fall or melted snow in the past 24 hours.		State of Ocean.	Direction of swell from—	Weather.	Observer.
								Direction.	Velocity		Force.	Amount.		Direction.							
												Up'er	Low'r	Up'er	Low'r						
			Inches.	Millimeters.	Fahrenheit.	Centigrade.	Per cent.	From—	Miles per hour.	Meters per second.	0—10.	0—10.	0—10.	From—	From—	Inches.	Millimeters.				
Wabash, Boston, Mass.			30.41	772.4	13	—10.6		Var.			1		6		N&E					Hazy	
Alarm, New York, N. Y.			29 26†	743.2†	18	— 7.8		ESE			0-1		8		S	0	0			Foggy	
Colorado, New York, N. Y.			30.42	772.7	18	— 7.8		NE			1		Fog			0	0			Foggy	
Franklin, New York, N. Y.			30.40	772.1	26.5	— 3.1	94	ENE			2		10					Smooth		‡D. clouds	
Intrepid, New York, N. Y.			30.35	770.9	18	— 7.8		ESE			0-1		7		S					Foggy	
Minnesota, New York, N. Y.			30.40	772.1	19	— 7.2	100	NE			2		10							Foggy	
Swatara, New York, N. Y.			30.44	773.2	17	— 8.3		NNW			2		10c							Foggy	
Navy Yard, Norfolk, Va.			30.30†	769.6†	35	1.7		ENE			2		10kn		WSW					Threatening	
Navy Yard, Pensacola, Fla.			29.85	758.2	49	9.3		W			1									Foggy	
Navy Yard, Portsmouth, N.H.			30.27	768.8	6	—14.4		NW			1									Clear	
St. Louis, League Island, Pa.			30.09	764.2	18.5	— 7.8		NE			4		10		W	0	0			Overcast	
Despatch, Washington, D. C.			30.25†	768.3†	18	— 7.8		N			1		10							Overcast	
Tallapoosa, Wash'gton, D. C.			30.19	766.8	17	— 8.3		NE			1		9							‡D. clouds	
Navy Yard, Wash'gton, D. C.			30.27	768.8	20	— 6.7														Overcast	

* It is not known that the barometer is corrected for temperature, instrumental error or elevation. † Anerold Barometer. ‡ Detached clouds.

COLLATED AT THE OFFICE OF THE CHIEF SIGNAL OFFICER OF THE ARMY, WASHINGTON, D. C.

The records which appear in this Bulletin are copied from the regular exchanges of this office, made in each instance in compliance with an especial request, and are published for the uses of the coöperating observers. The barometric readings in the first two columns are reduced to freezing and their respective standards; those in the second two also to mean sea-level. The "weather" is generally published as given.

When the distinction between the upper and lower strata of clouds is not reported, the *kinds* or *types*, viz: cirrus, cumulus, stratus, nimbus, scud, fracto, pallio, haze, fog and smoke, as indicated, respectively, by the letters c, k, s, n, d, f, p, hz., fg. and sm'e, are generally published with the amount in the lower-cloud column. The distinction between the upper and lower strata is carefully made in the United States Series and a portion of the Canadian Series, and the types are indicated by the above letters or their combinations in the proper column.

Albert J. Myer

Brig. Gen. (Bvt. Assgd.,) Chief Signal Officer, U. S. A.

BULLETIN

OF

INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON JANUARY 7, 1877.

7:35 A. M. WASHINGTON mean time.

6:7 A. M. MEXICO mean time.
7:7 A. M. SAN JOSE mean time.
0:6 P. M. LISBON mean time.
0:28 P. M. MADRID mean time.
0:43 P. M. GREENWICH mean time.
0:58 P. M. PARIS mean time.
1:1 P. M. BRUSSELS mean time.
1:4 P. M. UTRECHT mean time.
1:18 P. M. BERNE mean time.
1:26 P. M. CHRISTIANIA mean time.
1:33 P. M. COPENHAGEN mean time.
1:33 P. M. ROME mean time.
1:37 P. M. BERLIN mean time.
1:49 P. M. VIENNA mean time.
1:55 P. M. STOCKHOLM mean time.
2:18 P. M. ATHENS mean time.
2:39 P. M. CONSTANTINOPLE mean time.
2:44 P. M. ST. PETERSBURG mean time.

ALGERIAN SERIES.

Furnished by the coöperation of General d'Eudeville, Commandant Supérieur du Génie in Algeria.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Nemours			29.95	760.7	71.6	22.0	41	Calm			0		6			0	0	Fair	Charnot.
Algiers			30.04	763.1	66.2	19.0		WSW			1		4			0	0	Fair	Peter.
La Calle			30.08	763.9	69.8	21.0	38	W			3		5			0	0	Fair	Fleury.
Tunis			30.22	767.5	59 0	15.0		W			3		6			0	0	Fair	Jacques.
Sfax																			
Saida			30.10	764.5	64.9	18.3	35	SSW			1		2			0	0	Clear	Millot.
Tebessa			30.21	767.4	54.1	12.3		SE			2		2			0	0	Clear	Bourgeois.
Geriville			30.14	765.6	56.1	13.4	50	S			2		1			0	0	Clear	Lemaillot.
Laghouat			30.18	766.5	63.5	17.5	26	W			2		1			0	0	Clear	Guyot.
Biskra			30.25	768.4	63.5	17.5	43	E			3		0			0	0	Clear	Kuntz.

NOTE.—In the originals the distinction between the amount of upper and lower clouds is apparently not made. The weather is published as given. The rain-fall is measured at 7 a. m., local time.

AUSTRIAN SERIES.

Furnished by the cooperation of Professor Ferdinand Osnaghi, Director of the Imperial and Royal Central Meteorological Institute at Vienna.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Agram			30.04	762.9	50.0	10.0	89	SW			1		6			0	0		Prof. Ivan Stozir.
Cracow, I. R. Observatory			30.00	762.1	44.6	7.0	85	NE			1		1			0.024	0.6		Dr. Wierzbiski.
Eperies			30.07	763.8	46.4	8.0	86	S			5		4cs,s		N	0.024	0.60		Julius Mikolik.
Gratz	28.72	729.4	29.99	761.7	46.0	7.8	82	W			2		6			0	0		Andreas Rospini.
Hermannstadt	28.71	729.1	30.17	766.3	43.0	6.1	79	SE			1		1			0	0		Prof. Reissenberger.
Kremsmünster	28.52	724.3	29.92	759.9	30.9	— 0.6	96	NE			1		10			0	0		Prof. C. Wagner.
Lemberg			30.07	763.7	51.1	10.6	74	S			1		3			0	0		Dr. T. Stanecki.
Nyiregyhaza																			Habasuda Daniel.
Pola			30.09	764.2	53.2	11 8	91	S			1		10s			0	0		I.R.Hydrographic Of'ce.
Szegedin			30.08	764.0	53.6	12.0	79	S			2		8			0	0		Karl Stancel.
Trieste			30.10	764.6	51.8	11.0	94	Calm			0		10					Rain and fog	Prof. V. Farolfi.
Vienna			29.90	759.5	45.0	7.2	89	Calm			0		3			0.028	0.7		I. R. Central Met. Obs'y.

NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 7 p. m., local time. The elevation of Gratz is 343.5 meters, or 1,126.9 feet; Hermannstadt, 407.8 meters, or 1,337.9 feet; Kremsmünster, 383.6 meters, or 1,258.5 feet.

BELGIAN SERIES.

Furnished by the cooperation of J. C. Houzeau, Director of the Royal Observatory at Brussels.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Arlon			29.65	753.2	49.5	9.7	92	SW			2		5			0.146	3.7		Royal Observatory.
Brussels			29.47	748.6	52.2	11.2	74									0.130	3.30		
Furnes			29.35	745.4	51.6	10.9	79	SW			3		2			0.157	4.0		
Maseyck			29.54	750.3	54.3	12.4	67	S			3		3			0.110	2.8		

NOTE.—In the originals, the weather is occasionally given in general notes.

BRITISH SERIES

Furnished by the coöperation of Robert H. Scott, Esq., Director of the Meteorological Office, London, Alexander Buchan, Secretary of the Scottish Meteorological Society, Edinburgh, and the respective Observers.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force 0—10.	Clouds. Amount. Upper 0—10.	Clouds. Amount. Lower 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Aberdeen			28.86	733.0	44.4	6.9		SSE	24	10.7			6			0.330	8.38	*D. clouds	William Boswell.
Ardrossan																			William McNeil.
Armagh, Observatory			28.65	727.7	46.7	8.2		SSE	31	13.9									S. Call, for Dr. Robinson.
Birr Castle, (Parsonstown)			28.62	726.9	43.1	6.2		S			5–6		10					Raining	J. Dreyer.
Bradford																			J. McLandsborough.
Bridgetown, (Barbados)			30.06	763.5	81.0	27.2		NE			3		7					Threatening	Sergt. J. F. Halanen, A.
Cambridge, Observatory			29.19	741.4	51.0	10.6		S			4		7			0.lank	lank	*D. clouds	H. Todd. [H.C.
Cardington			29.17	740.9	47.0	8.3		S			6		10					Raining	John McLaren.
Carlisle																			T. Pell, for J. Cartmell.
Chatham, School M. E.			29.34	745.2	51.0	10.6		S			3		10					Overcast	Maj. C. N. Martin, R.E.
Dartmoor	27.69	703.3	29.17	740.9	44.4	6.9		SW			4		10					Raining	R. E. Power.
Davos Platz, (Switzerland)	24.75	628.6			40.6	4.8	55	SSW			1		4			0	0	*D. clouds	Francis Redford, M. A.
Donaghadee			28.72	729.5	45	7.2		SSW			5		5					*D. clouds	J. Mac Gowan.
Dover			29.29	744.0	50	10.0		SSW			6		8					Showery	J. Costello.
Eccles, (near Manchester)			28.98	736.1	48.0	8.9		SSW	8 4	3.8			6					Showery	Thomas Mackereth.
Falmouth, Observatory			29.07	738.4	51.0	10.6		SSW			5		6					Overcast	The Staff.
Fort Napier, (Natal)	27.85	707.4	30.08	764.0	62.4	16.9		E			2		10					Overcast	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.96	761.0	85.0	29.4		E			0		4					*D. clouds	
Galway, Queen's College			28.87	733.3	44	6.7		SW			8		10					Raining	Prof. A. H. Curtis.
Gibraltar, (Mediterranean)			29.93	760.2	64.0	17.8		S			2		9					Showery	Corpl. C. Aitken, A. H. C.
Glasgow, Observatory			28.82	732.0	44.8	7.1		SSE			2		10					Raining	Lewis Stuart.
Great Yarmouth			29.22	742.2	50	10.0		SSW			5		5					Squally	G. T. Watson.
Greenwich, Royal Obs'y			29.23	742.4	51.5	10.8		SSW			4		9			0am	am	Almost cov'd	The Staff, for G. B. Airy.
Guernsey			29.20	741.7	50.5	10.3		SSW			6		8			0am	0 m	Squally	Dr. S. I. Hoskins.
Helston			29.06	738.1	52	11.1		SW			6		8k			0.33	8.4		M. P. Moyle.
Holyhead			28.87	733.5	49	9.4		SSE			6		3					Haz	John Tibton.
Kew, Observatory			29.22	742.2	51.5	10.8		SSW	27	12.1			10					Threatening	The Staff.
Kingstown			28.73	729.7	49	9.4		S			6		9					Overcast	George Mitchell.
Leicester Museum			29.10	739.1	49.5	9.7		S			3		9					*D. clouds	Wm. J. Harrison, F.G.S.
Malta, (Mediterranean)			30.21	767.3	63.2	17.3		NW			3		4k					*D. clouds	Corp'l. P. Bravis, A.H.C.
Nairn			28.75	730.2	44	6.7		SW			1		10					Overcast	W. D. Penny.
Nassau, (Bahamas)			30.03	762.7	71.2	21.8		NW			6		8					Overcast	Surg. Maj. Henry.
Nottingham, Observatory			29.09	738.9	48.7	9.3		S			4		7c,d		S	0.11	2.92	*D. clouds	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			29.04	737.6	46.1	7.8		S W			5		8					Misty	Rev. Stephen Whitty.
Oxford, Radcliffe Obs'y			29.15	740.4	48	8.9		SSE			5		10					Gloomy	J. Lucas.
Plymouth			29.09	738.9	48.1	8.9		SW			4		10					Raining	John Merrifield.
Roche's Point			28.75	730.2	50	10.0		SSW			8		8					¾ clouded	W. Kennedy.
Saint Ann's Head																			John C. Walker.
Saint Helier, (Jersey)			29.21	741.9	51.4	10.8		SW			6		8					¾ clouded	A. P. Amy.
Sandwick Manse, (Orkneys)			28.81	731.8	39.2	4.0		S	10	4.5			7					*D. clouds	Rev. C. Clouston, LL. D.
Scarborough																			F. Shaw.
Scutari Cemetery, (Turkey)			30.23	767.8	58.0	14.4		SSE			1		5					*D. clouds	Sergt. W. H. Lyne.
Sheffield			29.03	737.3	48.1	8.9		SSW			6		4			0.04	1.02	Blue sky	W. F. Cooper.
Silloth Rectory			28.80	731.5	49.8	9.9	81	S			5		6			0.01	0.25	*D. clouds	Rev. Francis Redford
Stonyhurst, Observatory			28.98	736.1	44.7	7.1		SW			5		10k8					Overcast	Rev. S. J. Perry.
Stornoway, Lews C., (Hebr.)			28.66	728.0	44	6.7		S			2		5					*D. clouds	John Smith.
Stratfield Turgiss			29.17	740.9	51.7	10.9		SW			3		9					Squally	Rev. Charles H. Griffith.
Thurso			28.74	730.0	41	5.0		S			1		6					*D. clouds	John Trotter.
Truro, Royal Institution			29.11	739.4	54	12.2		SW			4		5					*D. clouds	W. Newcombe.
Valencia, Observatory			28.61	726.7	48.7	9.3		SW	69	30.8			10					Raining	The Staff.
SUB-SERIES.																			
Calf of Man, (Isle of Man)					48	8.9		S			8		10			0.30	7.6		Henry Mercer.
Cape Good Hope, Obs'y			30.07	763.8	85.4	29.7	37	SSE	12	5.4		0	0						The Staff, for E. J. Stone.
Hobart Town, (Tasmania)			29.80	756.9	66.5	19.2	94	S			1		0			0.17	4.3		Francis Abbott, F.R.A.S.
Leith, Restalrig Park			28.91	734.3	45.0	7.2		SW			3		9k			0.12	3.0	Cloudy	Andrew Gibb.
Mauritius, Observatory			29.90	759.4	83.7	28.7	66	NNW	15.3	6.8		0	8		N	0	0	*D. clouds	C. Meldrum.
Melbourne, Observatory			30.00	762.0	60.9	16.1	68	SSE	5	2.2		3				0	0	Fine	R. L. J. Ellery.
Monach L't-house, (Hebrides)			28.62	726.9	46	7.8		SSE			4	5	0	SE		0.3	7.6		J. Youngclause.
North Unst, (Shetland Is.)			28.85	732.8	40	4.4		SE			6		10			Blank	Blank		Robert Burnet.

NOTE.—Generally, the originals do not give the relative humidity, rain-fall, or distinction between upper and lower clouds. The originals give the wind direction to 32 points and weather by the Beaufort notation. The originals give the barometer for Aberdeen, Cardington, Galway, Oxford, St. Helier, Sandwick, Scarborough, Stonyhurst, Leith, Monach and North Unst as read off and the cloudiness for Stornoway by the scale 0 to 4. The wind-force is given by the scale 0 to 12 in the official series; 0 to 6 in the sub-series; except in lbs. per square foot for Greenwich and Hobart Town. The rain-fall is measured at Aberdeen at 10 a. m.; Bradford, 9 a. m.; Hobart Town, 7:30 a. m.; Nottingham, 6 p. m.; Mauritius, 9 a. m., local time. The elevation of Dartmoor is 1,400 feet, or 426.7 meters; Davos Platz, 5,105? feet, or 1,556.02 meters; Fort Napier, 2,200 feet, or 670.6 meters. *Detached cloud.

By authority of the MINISTER OF FOREIGN AFFAIRS.

COSTA RICA SERIES.

Furnished by the coöperation of Senor Federico Maison, Director of the Central Office of Statistics and Meteorology.

San José																			

DANISH SERIES.

Furnished by the coöperation of Captain N. Hoffmeyer, Director of the Royal Danish Meteorological Institute at Copenhagen.

Copenhagen			29.64	752.8	39.6	4.2	84	SSW			2		8						
Fanöe			29.47	748.6	41.0	5.0	92	S			6		8						
Godthaab, (Greenland)			29.63	752.7	10.9	—11.7	85	E			2		5						
Stykkisholm, (Iceland)			29.65	753.0	12.4	—10.9	93	NE			6		0						
Thorshavn, (Faröe)			29.01	736.8	34.9	1.6	87	NE			7		10					Raining	
Vestervig			29.41	747.0	39.2	4.0	97	S			6		8					Raining	

NOTE.—The originals give the wind-force by the scale 0 to 6; occasionally, weather by Vienna symbols; no distinction between the amount of upper and lower clouds.

FRENCH SERIES.

Furnished by the cooperation of His Excellency, U. J. Le Verrier, Director of the Paris Observatory, and the respective Observers.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Alengon	.....	.....	29.45	747.9	50.0	10	90	SSW	.....	.....	3	.....	10ks	.....	SSW	0.35	9.	Covered	Normal School.
Amiens	.....	.....	29.43	747.5	53.6	12.0	80	WSW	.....	.....	2	.....	5	.....	SW	0.039	1.0	Cloudy.....	Normal School.
Avignon	.....	.....	29.91	759.8	51.4	10.8	97	ESE	.....	.....	2	.....	8	.....	SE	0.098	2.5	Raining.....	Normal School.
Bar-sur-Seine	.....	.....	29.64	752.8	55.6	13.1	64	S	.....	.....	2	.....	8n	.....	WSW	0.055	1.4	Very cloudy	C. Saillard.
Beaumette, (near Angers)	.....	.....	29.46	748.2	52.2	11.2	86	S	50.1	22.4	.....	.....	10	.....	SW	0.205	5.2	Raining	Beaumette Observ'tory.
Beauvais	.....	.....	29.46	748.3	52.3	11.3	72	SSW	.....	.....	3	.....	8	.....	WSW	0.108	2.75	Very cloudy	Normal School.
Besançon	.....	.....	29.77	756.2	54.0	12.2	73	SW	.....	.....	2	.....	2	.....	SW	0.004	0.1	Slightly cl'dy	Normal School.
Bourg en Bresse	.....	.....	29.99	761.7	53.2	11.8	78	N	.....	.....	2	.....	5k	.....	N	0	0	Cloudy.....	Normal School.
Bourges	.....	.....	29.60	751.8	57.2	14	67	SSE	.....	.....	2	.....	2	.....	SE	0.181	4.6	Slightly cl'dy	Normal School.
Brest	.....	.....	29.15	740.3	51.6	10.9	84	SW	.....	.....	5	.....	8	.....	SW	0.541	13.75	Squally.....	Naval Observatory.
Carcassonne	.....	.....	29.74	755.5	55.0	12.8	77	E	.....	.....	2	.....	2	.....	W	0	0	Slightly cl'dy	Normal School.
Caen	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Chartres	.....	.....	29.45	748.1	52.3	11.3	86	SW	.....	.....	4	.....	8	.....	NE	0.067	1.7	.....	Normal School.
Châlons-sur-Marne	.....	.....	29.59	751.6	57.0	13.9	73	S	.....	.....	3	.....	5k	.....	E	0	0	Cloudy.....	Normal School.
Clermont	.....	.....	29.65	753.2	58.6	14.8	53	S	.....	.....	4	.....	2	.....	S	0	0	Slightly cl'dy	Puy de Dome Obs'y.
Commercy	.....	.....	29.65	753.1	52.3	11.3	63	SW	.....	.....	4	..c	..kn	.....	SW	0	0	Slightly cl'dy	Normal School.
Commune de Gréasque*	.....	.....	29.99	761.7	50.0	10.0	89	S	.....	.....	4	.....	10	.....	S	0.102	2.6	.....	M. Kina.
Grenoble	.....	.....	29.85	758.3	56.3	13.5	94	SSW	.....	.....	8	.....	5ks	.....	SW	0	0	Cloudy.....	Normal School.
La Roche-sur-Yon	.....	.....	29.47	748.6	51.8	11.0	83	S	.....	.....	6	.....	10	.....	.....	0.433	11.0	Covered	Normal School.
Le Mans	.....	.....	29.47	748.5	51.3	10.7	89	SW	.....	.....	6	.....	8	.....	SW	0.126	3.2	Very cloudy	Normal School.
Lons-Le-Saulnier	.....	.....	29.74	755.3	56.3	13.5	69	SE	.....	.....	4	.....	5	.....	.....	0	0	Cloudy.....	Normal School.
Lorient	.....	.....	29.39	743.0	53.6	12.0	93	SSW	.....	.....	6	.....	5	.....	SW	0.336	8.5	Cloudy	Naval Observatory.
Mâcon	.....	.....	29.94?	760.4?	54.5	12.5	83	S	.....	.....	6	.....	5	.....	S	0	0	Cloudy.....	Normal School.
Metz	.....	.....	29.75	755.7	52.9	11.6	77	SSE	.....	.....	2	1c	.....	S	.....	0.012	0.3	Very fine.....	M. Schuster.
Mirecourt	.....	.....	29.74	755.5	52.3	11.3	63	S	.....	.....	6	.....	10	.....	NW	0	0	Covered	Normal School.
Nismes	.....	.....	29.80	757.0	52.5	11.4	69	SE	.....	.....	4	.....	10	.....	NW	0.728	18.5	Covered	Normal School.
Orleans	.....	.....	29.52	749.8	53.2	11.8	86	SSE	.....	.....	2	.....	10	.....	.....	0.04	1.	Covered	Normal School.
Paris, Observatory	.....	.....	29.50	749.3	55.9	13.3	63	S	.....	.....	3	.....	9ck	.....	SW	0.035	0.88	Almost cov'd	National Observatory.
Parthenay	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Privas	.....	.....	29.81	757.2	51.1	10.6	.....	S	.....	.....	4	.....	10	.....	S	0	0	Covered	Normal School.
Rochefort, Observatory	.....	.....	29.54	750.2	54.7	12.6	68	S	.....	.....	6	.....	10	.....	N	0	0	Covered	Naval Observatory.
Rouen	.....	.....	29.40	746.7	54.9	12.7	83	SSW	.....	.....	2	.....	10	.....	.....	0.12	3.1	Covered	Normal School.
Saint Lo	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Tarbes	28.67	728.1	29.71	754.6	67.1	19.5	68	WSW	.....	.....	2	.....	2	.....	E	0	0	Slightly cl'dy	Normal School.
Villefranche	.....	.....	29.83	757.6	58.1	14.5	81	SE	.....	.....	6	.....	2	.....	W	0	0	Slightly cl'dy	Normal School.
Sub-Series.																			
Fort de France, Martinique	.....	.....	29.88	759.0	78.8	26	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	L'Abbé Marchési.
Marseilles	.....	.....	29.94	760.4	54.3	12.4	86	SE	.....	.....	3	.....	10	.....	.....	0.18	4.7	Raining.....	Marseilles Observatory.
Mont-Louis	24.69	627.0	30.00	762.0	42.4	5.8	70	SW	14.9	6.66	.....	.....	6	.....	SW	0	0	.....	—. Falguère.
Montsouris, Paris	.....	.....	29.49	749.1	56.1	13.4	64	SSW	.....	.....	4	.....	9	.....	SW	0.047	1.2	.....	Montsouris Observatory
Perpignan	.....	.....	29.78	756.4	63.8	12.1	69	W	5.6	2.50	.....	.....	9	.....	WSW	0	0	.....	Dr. Fines.
Pic du Midi, (Summit,) H. P.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. Baylac.
Pic du Midi, (Plantade,) H. P.	22.22	564.5	.....	.....	34.2	1.2	.....	SW	.....	.....	8	.....	7	.....	.....	0	0	Fair	General de Nansouty.
Saint Maur, (near Paris)	.....	.....	29.50	749.3	57.2	14.0	57	S	.....	.....	3	.....	10	.....	.....	0.063	1.6	Very cloudy	E. Renou.
Toulouse	.....	.....	29.71	754.6	57.2	14.0	67	SSE	.....	.....	8	.....	5	.....	.....	0	0	.....	Toulouse Observatory.
Tours	.....	.....	29.50	749.2	58.6	14.7	55	SSW	.....	.....	5	.....	7	.....	WSW	0.047	1.2	.....	C. Marquet.
Versailles, (near Paris)	.....	.....	29.19	749.0	56.1	13.4	64	SW	.....	.....	3	.....	10	.....	.....	0.018	0.45	Lightly cov.	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai)	.....	.....	30.54	775.8	33.4	0.8	82	ENE	5.6	2.5	.....	.....	0	.....	.....	0	0	.....	Marc Dechevrens, S. J.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—Generally, the originals give the wind-force by the scale 0 to 7; no distinction between upper and lower clouds, and, in the official series, the amount by the scale 0 to 4; the rain-fall as measured at 7, 8 or 9 a. m., local time; at Clermont, 9 a. m. of the following day; the weather in general terms as published. The elevation of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; Clermont, 388 meters, or 1,272.9 feet; Commune de Gréasque, 322 meters, or 1,056.4 feet; Pic du Midi, (Summit,) 2,877 meters, or 9,439.1 feet; Pic du Midi, (Plantade,) 2,366 meters, or 7,762.6 feet; Tarbes, 308 meters, or 1,010 feet. In correcting the Mont-Louis barometric observations for altitude, the constant 135. millimeters has been added. *Bouches-du-Rhône

GERMAN SERIES.

Furnished by the coöperation of Professor Dr. G. Neumayer, Director of the German Naval Observatory, Hamburg.

Bamberg	.....	.....	29.78	756.4	41.5	5.3	74	Calm	.....	.....	0	.....	3	.....	.....	0	0	.....	Prof. T. Hoh.
Berlin	.....	.....	29.81	757.2	44.6	7.0	71	S	.....	.....	1	.....	6	.....	.....	0	0	.....	Prof. Arndt.
Breslau	.....	.....	29.90	759.5	48.4	9.1	77	S	.....	.....	5	.....	1	.....	.....	0	0	Foggy	Royal University Obs'y.
Carlsruhe	.....	.....	29.72	754.9	51.4	10.8	67	SE	.....	.....	1	.....	1	.....	.....	0	0	.....	A. Senx.
Cassel	.....	.....	29.74	755.3	51.6	10.9	66	SSE	.....	.....	2	.....	3	SW	.....	0	0	.....	Dr. H. Möhl.
Crefeld	.....	.....	29.56	750.7	52.7	11.5	70	SE	.....	.....	3	.....	8	.....	.....	0	0	.....	Director Lose.
Emden	.....	.....	29.59	751.6	48.4	9.1	80	SW	.....	.....	4	.....	10	.....	.....	0.016	0.4	.....	Prof. Prestel.
Frankfort on the Main	.....	.....	29.74	755.4	47.3	8.5	77	SE	.....	.....	1	.....	3	.....	.....	0	0	.....	Physical Society.
Friedrichshafen	28.41	721.5	29.87	758.6	48.2	6.2	82	SW	.....	.....	2	.....	2	.....	.....	0	0	.....	M. Wilhelm.
Hamburg	.....	.....	29.62	752.4	48.4	9.1	75	S	.....	.....	4	.....	2c	WSW	.....	0.028	0.7	Very fine.....	Captain F. Hegemann.
Kiel	.....	.....	29.60	751.7	46.0	7.8	84	SSW	.....	.....	2	.....	5	.....	.....	0.008	0.2	.....	Prof. G. Karsten.
Königsberg, (Prussia)	.....	.....	29.94	760.5	38.3	3.5	87	SE	.....	.....	5	.....	2	.....	.....	0.035	0.9	.....	Prof. E. Luther.
Koslin	.....	.....	29.82	757.5	41.9	5.5	.....	S	.....	.....	1	.....	5	.....	.....	0	0	.....	H. Müller.
Leipsic	.....	.....	29.83	757.7	43.7	6.5	75	S	.....	.....	2	.....	9	WSW	.....	0	0	.....	Prof. Bruhns.
Memel	.....	.....	29.94	760.5	36.9	2.7	85	S	.....	.....	3	.....	2cs	.....	.....	0.165	4.2	.....	Reinbrecht & Skalweit.
Münster	.....	.....	29.59	751.5	52.7	11.5	75	SE	.....	.....	3	.....	0	.....	.....	0.087	2.2	.....	Prof. E. Heis.
Neufahrwasser	.....	.....	29.88	759.0	38.3	3.5	90	SSW	.....	.....	2	.....	3	.....	.....	0	0	.....	A Lothe.
Posen	.....	.....	29.87	758.7	43.9	6.6	85	SSE	.....	.....	1	.....	1	.....	.....	0	0	.....	Dr. Magener.
Strassburg, (in Alsace)	.....	.....	29.76	755.8	50.2	10.1	67	SW	.....	.....	1	.....	8	.....	.....	0	0	.....	Dr. Schur.
Stuttgart	.....	.....	29.78	756.3	50.0	10.0	53	S	.....	.....	1	.....	2	.....	.....	0	0	.....	Prof. Schoder.
Thorn	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Dr. Hasenbalg.
Treves, (Trier)	.....	.....	29.59	751.5	53.4	11.9	57	SW	.....	.....	6	.....	5	.....	.....	0.016	0.4	.....	Prof. Flesch.
Weissenburg, (Bavaria)	28.32	719.4	29.84	757.8	47.7	8.7	55	SE	.....	.....	2	.....	4	S	.....	0	0	.....	Dr. von Bebber.
Wustrow, Naval School	.....	.....	29.72	754.9	40.3	4.6	84	SSE	.....	.....	5	.....	10	.....	.....	0	0	.....	E. F. Schütz.
German Naval Series.																			
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—The elevation of Friedrichshafen is 413.4 meters, or 1,356 3 feet; Weissenburg, 431 meters, or 1,414.0 ft. In the originals the distinction between the amount of upper and lower clouds is not made. It is not always certain that the remarks in the weather column refer to the moment of observation.

GREEK SERIES.

Furnished by the coöperation of Professor Dr. J. F. Julius Schmidt, Director of the Royal Observatory at Athens.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Athens			30.24	768.2	62.2	16.8		S										Dusty	

Note.—The originals give the barometer corrected, but not reduced to sea-level; occasionally the kind of clouds; the weather as published. They omit the humidity, wind-force, amount of cloudiness and rain-fall.

ITALIAN SERIES.

Furnished by the cooperation of His Excellency the Minister of Agriculture, Industry and Commerce, and the respective Observers.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Udine	22.02	559.4	30.06	763.5	48.7	9.3	95	Calm	0	0			10			0.567	14.4	Raining	Prof. Giovanni Clodig.
Stelvio			30.13	765.2	24.8	— 4.0		W			8		10			0	0		Signora Ernesta Manfredi.
Valdobbia	22.09	561.1	30.14	765.5	27.5	— 2.5	91	NNW			2		10			0	0		Ab. Dom. Mongini.
Padua			30.06	763.4	47.3	8.5	97	SE	1.3	0.6			10	E		0.071	1.8	Raining	Prof. Dott. Lorenzoni.
Vicenza			30.06	763.4	48.9	9.4	92	NE	0	0			10			0.024	0.6	Light rain	Conte Alm. Da Schio.
Verona			30.05	763.3	48.2	9.0	96	SW			1		10			0.102	2.6	Raining	Dott. B. Bertoncelli.
Bergamo	28.72	729.5	30.08	764.0	46.4	8.0	86	SSW			1		10			0.063	1.6	Raining	Prof. Trionfini Carlo.
Domodossola			30.10	764.5	41.2	5.1	100	Calm			0		10			0.173	4.4	Raining	Prof. Giuseppe Calza.
Milan			30.11	764.7	46.2	7.9	92	NE			1		10			0	0		Ab. Gio. Capelli.
Pavia			30.07	763.8	46.2	7.9	91	S			1		10			0.039	1.0	Raining	Prof. Gio. Cantoni.
Moncalieri			30.10	764.5	44.4	6.9	94	NNE	0	0			10	NW		0	0		Prof. P. F. Denza.
Mondovi	28.12	714.1	30.09	764.3	43.3	6.3	82	NNW			2		9			0	0		Prof. D. C. Bruno.
Porto Maurizio			30.10	764.5	55.6	13.1	65	Calm			0		10			0	0		Prof. L. Vassallo.
Genoa			30.05	763.2	53.6	12.0	81	NE	0	0			10	SW		0.004	0.1	Light rain	Prof. G. M. Garibaldi.
Piacenza			30.08	764.1	46.0	7.8	96	NW	0.7	0.3			10			0.063	1.6	Rain & fog	Dott. G. Manzi.
Parma			30.10	764.4	47.3	8.5	96	NW			2		10			0.082	2.1	Raining	Prof. P. Pigorini.
Florence			30.09	764.3	55.0	12.8	93	NW			2		10	WSW		0.008	0.2	Light rain	Cav. F. Meucci.
Leghorn			30.05	763.2	58.6	14.8	77	SSE	3.1	1.4			9	W		0	0		Prof. P. Monte.
Siena	28.85	732.9	30.09	764.2	50.9	10.5	90	ESE	0	0			9	SW		0	0		Prof. L. Toscani.
Urbino	28.52	724.5	30.12	765.0	51.6	10.9	79	S			2		10			0	0		Prof. P. Serpieri.
Pesaro			30.09	764.3	51.3	10.7	94	E	0	0			10	SW		0	0		Prof. Luigi Guidi.
Ancona			30.11	764.9	50.0	10.0	87	SE			2		10			0	0		Prof. F. De— Bosis.
Grosseto			30.10	764.5	57.6	14.2	13	SE			2		8	S		0.02	0.6	Light rain	Avv. P. Ponticelli.
Rome			30.12	765.0	55.8	13.2	92	SSE	4.8	1.9			10	SSW		0.154	3.9	Raining	Prof's. P. Secchi & L. Respighi.
Naples, O. U			30.12	765.1	60.8	16.0	74	SW			2		9	WNW		0	0		Prof. L. Palmieri.
Lecce			30.19	766.8	55.8	13.2	84	SSE	9.4	4.2			8			0.091	2.3	Raining	Prof. C. De—Giorgi.
Cosenza			30.16	766.1	56.8	13.8	69	SW	2.5	1.1			2			0.189	4.8	Raining	Prof. F. D. Conti.
Cagliari																			Prof. A. Pacinotti.
Litposto, (Sicily)			30.08	764.1	61.5	16.4	79	SE			2		4	W		0	0		Prof. F. Cafiero.
Palermo																			Prof. G. Cacciatore.
Caltanissetta	28.16	715.2	30.14	765.6	53.6	12.0	67	WNW			2		7	NE		0	0		Prof. A. Pagani.
Siracusa			30.05	763.3	60.8	16.0	75	E			1		10	SE		0	0		Prof. V. Giuliano.
Sub-Series.																			
Naples, S. R.			30.15	765.9	57.6	14.2	79	SW	0	0			10	W		0	0		Prof. F. Brioschi

Note.—The originals give the wind-force by the scale 0 to 4, or the velocity in kilometers per hour; generally, no distinction between upper and lower clouds; occasionally the weather by the Vienna symbols. The elevation of Stelvio is 2,543.0 meters, or 8,342.9 feet; Valdobbia, 2,548.0 meters or 8,359.3 feet; Bergamo, 379.6 meters, or 1,245.3 feet; Mondovi, 556 meters, or 1,824.2 feet; Urbino, 451 meters, or 1,479.7 feet; Siena, 348.5 meters, or 1,143.3 feet; Caltanissetta, 570.3 meters, or 1,871.0 feet.

JAPANESE SERIES.

Tokei

MEXICAN SERIES.

By authority of the Secretary of Public Works.

Furnished by the coöperation of Senor Mariano Barcena, Director of the Central Meteorological Observatory in the City of Mexico.

Mexico	Mariano Barcena.
	Vicente Reyes.
	Miguel Perez.
	(Engineers in charge.)

Note.—The elevation of Mexico is 2,290 meters, or 7,512.9 feet. The rain-fall is measured at 6 a. m., local time.

NETHERLANDS' SERIES.

Furnished by the cooperation of Professor Buys Ballot, Director of the Royal Meteorological Institute of the Netherlands at Utrecht.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Flushing			29.43	747.4	49.6	9.8		S			5					0.004	0.1		
Groningen			29.41	747.1	47.3	8.5		S			5					0.031	0.8		
Helder			29.37	745.9	48.2	9.0		S			5					0.165	4.2		
Utrecht			29.44	747.7	48.0	8.9	85	SSE			4		5			0.098	2.5	Cloudy	

Note.—The originals give the wind-pressure in kilograms per square meter; for Utrecht, they give the weather as published, from which the amount of cloudiness is taken by the scale 0 to 4, without distinguishing between upper and lower clouds. It is assumed that the barometer readings have been reduced to sea-level.

NORWEGIAN SERIES.

Furnished by the cooperation of Professor H. Mohn, Director of the Royal Norwegian Meteorological Institute at Christiania.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Bergen			29.08	738.7	41.7	5.4	82	S	29.8	13.3			10					Raining	
Brönö			29.24	742.8	21.2	— 6.0	69	ENE	17.9	8			3						
Christiania			29.40	746.8	22.3	— 5.4	90	NE	1.1	0.5			10			0.638	16.2	Snowing	
Tromsö			29.37	745.9	15.4	— 9.2	53	SE	4.5	2			0			0.138	3.5		

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols. The cloudiness and weather at Bergen refer to 2h., p. m., local time, instead of 1h., 4 min.

PORTUGUESE SERIES.

Furnished by the coöperation of J. C. de Brito Capello, Director of the Meteorological Observatory of the Infante Don Luiz at Lisbon.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Angra, (Azores)			29.41	747.0	51.4	10.8	67	W	15.0	6.7			6			0.039	1.0		Dr. J. A. Sampaio.
Campo Major			29.80	756.8	59.0	15.0	87	SW	13.7	6.1			10	SW		1.646	41.8		Dr. A. M. R. dos Santos.
Funchal, (Madeira)			29.76	756.0	66.2	19.0	81	WSW	4.9	2.2			10			0.437	11.1		Capt. D. A. de Cunha.
Lisbon			29.73	755.1	60.3	15.7	89	SW	27.3	12.2			10			0.803	20.4		The Observatory.
Ponta Delgada, (Azores)			29.46	748.2	58.3	14.6	53	WNW	9.4	4.2			5			0.205	5.2		

Note.—The originals give the wind-velocity in kilometers per hour; occasionally, the weather by the Vienna symbols; the amount of cloudiness without distinguishing between upper and lower clouds; the barometer corrected but not reduced to sea-level. The rain-fall at Libson is measured at noon, instead of 0 h. 6 m., p. m.

RUSSIAN SERIES.

Furnished by the cooperation of Professor H. Wild, Director of the Imperial Central Physical Observatory of Russia, at St. Petersburg.

Warsaw			30.00	762.1	38.7	3.7	93	SE	11	5			0						Astronomical Obs.
Wilna																			Astronomical Obs.
Dorpat			29.96	761.0	37.2	2.9	93	SSW	9	4			10						Physical Cabinet.
St. Petersburg			29.89	759.1	35.6	2.0	100	SW	11	5			10						Central Physical Obs.
Kuopio			29.67	753.6	27.0	— 2.8	100	ESE	7	3			10						Ch. Forsten.
Kieff			30.23	767.7	34.2	1.2	96	SSE	4	2			10						Physical Cabinet.
Nikolaiev			30.34	770.6	46.4	8.0	96	S	9	4			10					Foggy	Kurdakof.
Kertch			30.38	771.7	57.2	14.0	67	NNW	2	1			1						Lagorio.
Moscow			30.28	769.2	33.4	0.8	94	SSW	7	3			10						Meteorological Obs.
Lugan			30.34	770.7	43.2	6.2	82	E	7	3			1						Meteorological Obs.
Archangel			29.91	759.8	10.0	—12.2	90	SSE	13	6			10						Ogorodnikof.
Tiflis	29.02	737.0	30.50	774.7	41.4	5.2	69	W	4	2			0						Physical Observatory.
Astrakhan			30.51	774.9	35.1	1.7	91	ESE	11	5			10						Sebastianof.
Kasan			30.24	768.1	33 6	0.9	100	Calm	0	0			10						Physical Cabinet.
Orenburg			30.77	781.5	—12.8	—24.9		E	13	6			0						Tschernischef.
Ekaterinburg	29.48	748.7	30.53	775.5	2.7	—16.3	88	Calm	0	0			10					Snowing	Meteorogical Obs.
Nukuss			30.64	778.3	23.4	— 4.8	86	NE	4	2			0						
Kusaly																			Bobrof.
Tashkend																			Michelson.
Barnaul			30.55	776.0	— 7.6	—22.0	80	SW	9	4			10					Snowing	Meteorological Obs.
Yeniseisk			30.47	774.0	—11.4	—24.1	67	SE	9	4			10						Marks.
Irkutsk																			Usolzef.
Peking, (China)			30.45	773.5	20.1	— 6.6	73	Calm	0	0			0						Physical Observatory.
Nertchinsk	28.23	717.0	30.65	778.5	—20.7	—29.3	95	Calm	0	0			2						Meteorological Obs.
Vladivostock			30.14	765.6	14.0	—10.0	94	NW	9	4			0						
Nikolaievsk, on the Amoor					24.4	— 4.2		Calm	0	0			5					Snowing	

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols; they omit the rain-fall. The elevation of Tiflis is 409 meters, or 1,341.8 feet; Ekaterinburg, 306. 4 ? m., or 1,005.2 ? ft.; Tashkend, 494.2 ? m., or 1,621.3 ? ft.; Irkutsk, 392 m., or 1,286 ft.; Nertchinsk, 592.0 ? m., or 1,942.2 ? ft.; Oorga, 1,281.0 ? m., or 4,202.6 ? ft.

SPANISH SERIES.

Furnished by the cooperation of Antonio Aguilar, Director of the Royal Observatory at Madrid, and of Don Cecilio Pujazon, Captain R. N. Director of the Naval Observatory at San Fernando.

Madrid			29.75	755.7	53.1	11.7	92	S	11.2	5.00			10			0.598	15.2	Covered	Royal Observatory.
San Fernando			29.90	761.0	63.7	17.6	89	SW	4.9	2.2		0	9		SW	0.461	11.7		Naval Observatory.

Note.—The originals give the weather in general terms, as published; rain-fall for San Fernando from preceding to following midnight; wind-velocity for Madrid in kilometers per hour.

SWEDISH SERIES.

Furnished by the coöperation of Professor R. Rubenson, Director of the Royal Swedish Meteorological Institute, at Stockholm, and of Dr. H. H. Hildebrandsson, Chief of the Meteorological Division of the Upsala Observatory.

Haparanda			29.77	756.2	— 5.1	—20.6	86	N			2		10			0.079	2.0		
Umea			29.70	754.3	3.9	—15.6	90	NE			2		10			0	0		
Hernosand			29.65	753.2	6.8	—14.0	91	NE			4		10			0.075	1.9		
Stockholm			29.58	751.3	30.0	2.2	93	S			4		10			0.016	0.4		
Wisby			29.74	755.4	39.9	4.4	77	SSW			6		5			0.059	1.5		
Sub-Series.																			
Upsala			29.68	751.3	24.6	— 4.1	95	NW	2.:	1.0			10			0.047	1.20	Foggy	Dr. Hildebrandsson.

Note.—The originals give the wind-force by the scale 0 to 6, and Upsala also velocity in meters per second; occasionally, the weather by the Vienna symbols, or in general terms; no distinction between the amount of upper and lower clouds. The rain- all is measured at 8 a. m., local time.

SWISS SERIES.

Furnished by the coöperation of Professor R. Wolf, Director of the Observatory at Zurich, and of Professor E. Plantamour, Director of the Observatory at Geneva.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Geneva	28.39	721.2	29.83	757.7	50.2	10.1	70	ENE	.....	.....	1	.....	8	.....	.....	0	0	Cloudy	The Observatory.
Zurich	28.19	716.1	29.87	758.5	41.5	5.3	85	NW	.....	.....	1	.....	4	.....	.....	0	0	Bright	The Observatory.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Note.—For Geneva the corresponding departures from the normal values are: Barometer, —6.5 mm; Thermometer, +8.8 cent.; Relative Humidity, —10 per cent.

Note.—The rain-fall is measured at Zurich at 7 a. m. on the following day. The originals give the barometer corrected but not reduced to sea-level; the wind-force by the scale 0 to 4 for Zurich; the amount of cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The elevation of Geneva is 408 meters, or 1,339 feet, and that of Zurich 470 meters, or 1,542 feet.

TURKISH SERIES.

Furnished by the coöperation of A. Coumbary, Effendi, Director of the Central Observatory at Constantinople, and of Professor C. V. A. Van Dyck, Superintendent of the Lee Observatory at Beirut.

Constantinople	.....	.....	30.32	770.1	57.0	13.9	59	SE	8	3.5	.....	.....	4	.....	SW	0	0	.....	
Fao, (Persian Gulf)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Salonica	.....	.....	30.32	770.2	65.8	18.8	.....	W	.....	.....	1	.....	10	.....	.....	.....	.....	.....	
Valona	.....	.....	30.32	770.0	57.2	14.0	.....	E	.....	.....	2	.....	2	.....	.....	.....	.....	.....	
Varna	.....	.....	30.10	764.5	50.0	10.0	.....	SE	.....	.....	1	.....	8	.....	.....	.....	.....	.....	
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y	.....	.....	30.22	767.6	67.5	19.7	64	WNW	.....	.....	1	.....	0	.....	.....	0	0	Blue sky	Prof. C. V. A. Van Dyck

Note.—The originals give the wind-force by the scale 0 to 7, (except Beirut, by the scale 0 to 12, and Constantinople velocity in meters per second;) the weather in general terms as published; no distinction between upper and lower clouds, and, except Constantinople and Beirut, the amount by the scale 0 to 4. It is assumed that the barometer is reduced to sea-level.

CANADIAN SERIES.

Furnished by the coöperation of Professor G. T. Kingston, Director of the Magnetic Observatory at Toronto, and Superintendent of the Meteorological Office of the Dominion of Canada, and the respective Observers. Those marked with a star (*) are also telegraphed daily to the office of the Chief Signal Officer, U. S. Army.

Bathurst, N. B	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Hon. J. Ferguson.
Brockville, Ontario	.....	.....	29.45	748.0	17	— 8.3	.....	NE	3	1.3	.....	.....	10s	.....	NE	0.30	7.6	Light snow	W. R. Bigg.
*Chatham, N. B	.....	.....	30.00	762.0	11	—11.7	90	NE	1	0.4	.....	.....	10s	.....	.....	0	0	Cloudy	G. A. Blair.
Charlottetown, P. E. Island	.....	.....	30.08	764.0	20	— 6.7	90	Calm	0	0	.....	.....	10s	.....	.....	0	0	Cloudy	H. J. Cundall, C. F.
Cornwall, Ontario	.....	.....	29.47	748.5	20.0	— 6.7	92	S	.....	.....	3	.....	10n	.....	.....	.....	.....	Snowing	James Smith, M. A.
Dalhousie, N. B	.....	.....	.....	.....	.....	.....	.....	SE	.....	.....	1	.....	.....	.....	.....	0	0	Threatening	H. A. Johnson.
Esquimault, B. C	.....	.....	30.36	771.1	39.6	4.2	99	Calm	.....	.....	.....	.....	10n	.....	.....	0.02	0.5	Cloudy	W. H. Bevis.
Fredericton, N. B	.....	.....	29.91	759.7	19.2	— 7.1	97	Calm	0	0	.....	.....	10n	.....	.....	In up.	In up.	Snowing	Prof. Harrison.
*Fort Garry, Manitoba	.....	.....	30.28	769.1	—24	—31.1	91	NW	2	0.9	.....	0	0	.....	.....	0.090	2.29	Clear	James Stewart.
Goderich, Ontario	.....	.....	29.55	750.6	29.7	— 1.3	86	W	.....	.....	1	10k	0	N	.....	0	0	Dull	H. J. Strang, M. A.
Granton, Ontario	28.36	720.3	29.49	749.0	28.2	— 2.1	.....	W	.....	.....	1	.....	10n	.....	.....	0	0	Cloudy	James Grant.
*Halifax, N. S	.....	.....	30.02	762.0	30	— 1.1	98	SE	11	4.9	.....	.....	10n	.....	.....	0	0	Threatening	F. Allison, M. A.
Hamilton, Ontario	.....	.....	29.56	750.8	29.9	— 1.2	56	W	.....	.....	1	5c	0	.....	.....	0	0	Cloudy	G. Dickson.
Heart's Content, N. F	.....	.....	30.18	766.6	25	— 3.9	87	W	.....	.....	3	2cs	0	.....	.....	0.02	0.5	Fine	E. Weedon.
*Kingston, Ontario	.....	.....	29.44	747.8	21	— 6.1	96	NE	7	3.1	.....	.....	10n	.....	NE	0.17	4.3	Heavy snow	S. Woods, M. A.
*Montreal, Quebec	.....	.....	29.50	749.3	19	— 7.2	97	NE	12	5.4	.....	.....	10n	.....	.....	0.10	2.5	Heavy snow	C. H. McLeod, C. E.
*Ottawa, Ontario	.....	.....	29.48	748.8	21	— 6.1	78	NE	6	2.7	.....	.....	10n	.....	E	0.15	3.8	Light snow	J. B. Haney.
*Parry Sound, Ontario	.....	.....	29.44	747.8	29	— 1.7	85	S	7	3.1	.....	5k	5ks	S	S	0	0	Threatening	Rev. R. Mosley.
Port Dover, Ontario	.....	.....	29.50	749.3	31	— 0.6	89	W	10	4.5	.....	5k	5k	W	W	Imp.	Imp.	Cloudy	H. Morgan.
Port Hastings, N. S	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Peter Grant.
Port Stanley, Ontario	.....	.....	29.53	750.0	31	— 0.6	88	W	16	7.2	.....	.....	10n	.....	W	0	0	Cloudy	M. Payne.
*Quebec, Quebec	.....	.....	29.67	753.6	22	— 5.6	86	NE	30	13.4	.....	.....	10n	.....	NE	0	0	Cloudy	Capt. Ashe, R. N.
*Rockliffe, Ontario	.....	.....	29.49	749.0	17	— 8.3	93	E	12	5.4	.....	.....	10s	.....	S	0	0	Cloudy	
St. John, N. B	.....	.....	29.81	757.2	30	— 1.1	89	S	6	2.7	.....	.....	10n	.....	.....	0.590	14.99	Overcast	G. Murdoch, C. E.
*Saugeen, Ontario	.....	.....	29.46	748.3	31	— 0.6	95	W	9	4.0	.....	.....	10n	.....	W	0	0	Cloudy	K. Stewart.
Stayner, Ontario	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	R. J. Cole.
Stratford, Ontario	28.19	716.0	29.50	749.3	27.4	— 2.6	94	NW	17	7.6	.....	.....	10s	.....	.....	0	0	Cloudy	C. J. MacGregor, M. A.
*Sydney, C. B	.....	.....	30.19	766.8	19	— 7.2	89	S	4	1.8	.....	.....	10n	.....	.....	0	0	Cloudy	T. C. Hill.
*Toronto, Ontario	.....	.....	29.46	748.3	30	— 1.1	93	N	4	1.8	.....	8cs	2s	W	W	0.03	0.8	Cloudy	Magnetic Observatory.
Woodstock, Ontario	.....	.....	29.50	749.3	27.2	— 2.7	91	W	9	4.0	.....	.....	9s	.....	.....	0	0	Cloudy	J. Montgomery.
Sub-Series.																			
St. Johns, Newfoundland	.....	.....	30.17	766.3	25.0	— 3.9	.....	W	.....	.....	.....	10k	5s	S	.....	0	0	Fair	John Delany.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
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.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Note.—The originals for Brockville, Charlottetown, Port Dover, Port Stanley, St. Johns, N. F., Stayner and those telegraphed, give the amount of cloudiness by the scale 0 to 4. The elevation of Granton is 1,015 feet, or 309.4 m.; Stratford, 1,182 feet, or 360.3 m.

UNITED STATES SERIES.

Furnished by the coöperation of Bvt. Brig. Gen. Albert J. Myer, Chief Signal Officer, U. S. Army.

STATIONS.	Barometer. Corrected for instru-m'tal error and temperature. Inches.	Millimeters.	Barometer. Reduced to sea-level. Inches.	Millimeters.	Temperature of the Air. Fahrenheit.	Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Velocity. Miles per hour.	Meters per second.	Force. 0—10.	Clouds. Amount. Up'er. 0—10.	Low'r. 0—10.	Direction. Upper. From—	Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Millimeters.	Weather.	OBSERVER.
Albany, N. Y.			29.24	742.7	32	0.0	100	Calm	0	0			10n			0.71	18.0	Light snow	
Alpena, Mich.			29.47	748.5	26	−3.3	76	SW	14	6.3			10s			0	0	Cloudy	
Atlantic City, N. J.			29.33	745.0	36	2.2	100	SW	17	7.6			10s		SW	0.65	16.5	Cloudy	
Augusta, Ga.			29.90	759.4	41	5.0	82	W	5	2.2			10s		W	0.76	19.3	Cloudy	
Baltimore, Md.			29.40	746.7	34	1.1	90	SW	12	5.4		2ck	2s	W		1.43	36.3	Fair	
Barnegat, N. J.			29.25	742.9	39	3.9	100	SW	30	13.4			10s		W	1.58	40.1	Cloudy	
Bismarck, Dakota	28.47	723.1	30.42	772.7	−20	−28.9	63	NW	2	0.9			10s			0	0	Threatening	
Boston, Mass.			29.28	743.7	37.5	3.1	100	E	24	10.7			10n			1.33	33.8	Heavy rain	
Breckenridge, Minn.			30.24	768.1	−15.5	−26.4	72	SW	22	9.8		0	0			0	0	Clear	
Buffalo, N. Y.			29.40	746.7	32.0	0.0	89	N	2	0.9			10n			0.11	2.8	Light snow	
Burlington, Vt.			29.42	747.3	30	−1.1	100	N	4	1.8			10n			0.19	4.8	Heavy snow	
Cairo, Ill.			29.86	758.4	37	2.8	90	SW	5	2.2			10s			0.02	0.5	Cloudy	
Cape Hatteras, N. C.			29.64	752.8	48	8.9	85	W	22	9.8			10s		W	0.92	23.4	Cloudy	
Cape Henry, Va.			29.54	750.3	39	3.9	73	SW	22	9.8		5k	5s	SW	SW	0.95	24.1	Cloudy	
Cape Lookout, N. C.			29.73	755.1	47	8.3	85	SW	32	14.3			10s		SW	0.78	19.8	Cloudy	
Cape May, N. J.			29.36	745.7	38	3.3	100	SW	28	15.5			Fog			0.43	10.9	Foggy	
Charleston, S. C.			29.89	759.2	48	8.9	77	SW	12	5.4		0	8s		W	0.41	10.4	Clearing	
Cheyenne, Wyoming	23.82	605.0	29.76	755.9	9	−12.8	100	N	24	10.7			10n			0.01	0.3	Light snow	
Chicago, Ill.			29.70	754.4	25	−3.9	75	W	6	2.7		5k	0	NW		0	0	Fair	
Cincinnati, Ohio			29.66	753.4	37	2.8	80	W	5	2.2			10s		W	0.06	1.5	Cloudy	
Cleveland, Ohio			29.57	751.1	33	0.6	79	SW	13	5.8			10s		SW	0.09	2.3	Cloudy	
Corsicana, Tex.			29.85	758.2	38	3.3	80	S	5	2.2			10s			0	0	Cloudy	
Davenport, Iowa			29.90	759.4	13	−10.6	80	NW	13	5.8		5cs	5s		NW	Inap.	Inap.	Fair	
Denison, Tex.			29.76	755.9	38	3.3	80	S	10	4.5			10s		S	0	0	Cloudy	
Denver, Col.	24.59	624.6	29.81	757.2	18	−7.8	84	N	36	16.1			10s			0	0	Cloudy	
Detroit, Mich.			29.53	750.0	31	−0.6	79	W	8	3.6			10s			0	0	Cloudy	
Dodge City, Kan.	27.18	690.4	29.55	750.6	25	−3.9	88	NE	14	6.3			10s		NE	0	0	Cloudy	
Dubuque, Iowa			29.89	759.2	10	−12.2	79	NW	6	2.7			10s			0	0	Cloudy	
Duluth, Minn.			29.94	760.5	2	−16.7	72	NW	1	0.4		0	0			0.15	3.8	Clear	
Eastport, Me.			29.82	757.4	31	−0.6	100	E	18	8.0			10n			0.03	0.8	Light snow	
Erie, Pa.			29.48	748.8	33	0.6	100	SW	8	3.6			10s			0.51	13.0	Cloudy	
Escanaba, Mich.			29.65	753.1	10	−12.2	68	W	9	4.0		0	2s		W	0.07	1.8	Clear	
Fort Gibson, Indian Ter.			29.71	754.6	35	1.7	80	SE	6	2.7		0	8s		W	0	0	Fair	
Ft. St. Michael, Alaska																			
Fort Sill, Indian Ter.	28.43	722.1	29.54	750.3	36	2.2	45	S	6	2.7		5c	0	SW		0	0	Fair	
Fort Sully, Dakota	28.49	723.6	30.40	772.1	−7	−21.7	80	NW	13	5.8		0	0			0.04	1.0	Clear	
Florence, Arizona	28.43	722.1	29.98	761.5	46	7.8		SW				0	0			0	0	Clear	
Galveston, Tex.			30.00	762.0	48	8.9	85	S	5	2.2		1c	0			0	0	Clear	
Grand Haven, Mich.			29.62	752.3	31	−0.6	68	W	20	8.9		0	5s		W	0	0	Fair	
Indianapolis, Ind.			29.72	754.9	34	1.1	79	W	6	2.7			10s			0	0	Threatening	
Indianola, Tex.			29.98	761.5	47	8.3	85	SE	9	4.0		0	0			0	0	Clear	
Jacksonville, Fla.			29.99	761.7	48	8.9	77	SW	6	2.7		0	0			0.06	1.5	Clear	
Keokuk, Iowa			29.82	757.4	21	−6.1	71	N	6	[illegible].7			10s		N	0	0	Cloudy	
Key West, Fla.			29.95	760.7	63	17.2	83	NE	12	5.4		5cs	0			0.40	10.2	Fair	
Kittyhawk, N. C.			29.66	753.4	39	3.9	100	W	18	8.0			10n			0.38	9.7	Light rain	
Knoxville, Tenn.			29.89	759.2	33	0.6	89	S	8	3.6			10s			0.75	19.1	Cloudy	
La Crosse, Wis.			29.91	759.7	6	−14.4	76	W	11	4.9			10s		W	0.01	0.3	Cloudy	
Leavenworth, Kan.			29.86	758.4	23	−5.0	100	N	16	7.2			10n			Inap.	Inap.	Light snow	
Louisville, Ky.			29.79	756.7	37	2.8	90	SW	8	3.6			10s		SW	0.03	0.8	Threatening	
Lynchburg, Va.			29.53	750.0	39	3.9	71	SW	6	2.7		10k	0	W		1.30	33.0	Cloudy	
Malone, N. Y.			29.38	746.2	27	−2.8	100	Calm	0	0			10n			0.31	7.9	Heavy snow	
Marquette, Mich.			29.63	752.6	10	−12.2	79	NW	17	7.6			10s			0	0	Cloudy	
Memphis, Tenn.			29.93	760.2	37	2.8	90	S	4	1.8			10s			0.01	0.3	Cloudy	
Milwaukee, Wis.			29.73	755.1	16	−8.9	83	NW	16	7.2		20k	2s	NW		0	0	Fair	
Mobile, Ala.			30.07	763.8	44	6.7	84	NW	2	0.9			10s			Inap.	Inap.	Cloudy	
Montgomery, Ala.			30.04	763.0	41	5.0	91	W	5	2.2			10s			0.30	7.6	Cloudy	
Morgantown, W. Va.	28.59	726.2	29.65	753.1	34	1.1	80	SW	7	3.1			10n		SW	0.79	20.1	Light snow	
Mt. Washington, N. H.	22.85	580.4	29.21	741.9	18	−7.8	100	NE	50	22.4			10n		NE	0.14	3.6	Heavy snow	
Nashville, Tenn.			29.87	759.7	38	3.3	90	Calm	0	0			10s		SW	0.13	3.3	Cloudy	
New Haven, Conn.			29.13	739.9	40	4.4	100	SW	15	6.7			10n			1.20	30.5	Light rain	
New London, Conn.			29.17	740.9	43	6.1	100	SE	24	10.7			10n			1.63	41.4	Heavy rain	
New Orleans, La.			30.06	763.5	39	3.9	81	Calm	0	0		0	sm', fg'		W	Inap.	Inap.	Smoky	
Newport, R. I.			29.20	741.7	40	4.4	100	SE	22	9.8			10n		SE	1.02	25.9	Light rain	
New York, N. Y.			29.15	740.4	42	5.6	100	S	12	5.4			10n, fg'			0.86	21.8	Light rain	
Norfolk, Va.			29.56	750.8	41	5.0	83	SW	18	8.0			10s		SW	0.43	10.9	Cloudy	
North Platte, Neb.	27.04	686.8	29.81	757.2	10	−12.2	100	NE	28	12.5			10n			0.83	21.1	Light snow	
Omaha, Neb.	28.85	732.8	30.01	762.2	13	−10.6	81	N	24	10.7			10n			0.03	0.8	Light snow	
Oswego, N. Y.			29.33	745.0	33	0.6	100	N	10	4.5			10n			0.83	21.1	Heavy snow	
Pembina, Dakota			30.27	768.8	−20	−28.9	63	NW	8	3.6		0	0			0	0	Clear	
Philadelphia, Pa.			29.20	743.2	37	2.8	100	W	25	11.2			10s		W	0.42	10.7	Cloudy	
Pike's Peak, Col.	17.42	442.5	29.63	752.6	1.5	−16.9	100	NW	14	6.3			Fog			0.12	3.0	Heavy snow	
Pittsburgh, Pa.			29.49	749.0	34	1.1	90	NW	6	2.7			10n			1.02	25.9	Light snow	
Port Huron, Mich.			29.51	749.5	24	−4.4	87	SW	6	2.7			10s, sm'			0	0	Threatening	
Portland, Me.			29.46	748.3	28	−2.2	100	NE	20	8.9			10n			0.16	4.1	Light snow	
Portland, Oregon			30.36	771.1	42	5.6	91	N	3	1.3		0	5s			0.01	0.3	Fair	
Punta Rassa, Fla.			30.07	763.8	60.5	15.8	82	NW	11	4.9		5c	0	SW		0.10	2.5	Fair	
Rochester, N. Y.			29.35	745.5	32	0.0	89	N	6	2.7			10n			0.85	21.6	Heavy snow	
Salt Lake City, Utah	25.61	650.5	29.94	760.5	31	−0.6	79	SE	4	1.8		3cs	0			0	0	Fair	
Sandy Hook, N. J.			29.14	740.1	42	5.6	83	SW	36	16.1			10s		SW	1.07	27.2	Cloudy	
San Diego, Cal.			30.00	762.0	58	14.4	34	E	3	1.3		0	0			0	0	Clear	
San Francisco, Cal.			30.05	763.3	51	10.6	78	N	4	1.8		Haze	0			0	0	Hazy	
Santa Fé, N. M.	23.08	586.2	29.62	752.3	22	−5.6	58	S	3	1.3		2c	0	W		0	0	Clear	
Savannah, Ga.			29.95	760.7	49	9.4	71	NW	12	5.4			10s		NW	0.27	6.9	Clearing	
Shreveport, La.			29.97	761.2	30	−1.1	89	S	1	0.4		0	2s			Inap.	Inap.	Fair	
Smithville, N. C.			29.79	756.7	46	7.8	85	SW	14	6.3			10ks		W	0.47	11.9	Cloudy	
Springfield, Mass.			29.23	742.4	37	2.8	95	NE	6	2.7			10n			1.38	35.1	Light rain	
St. Louis, Mo.			29.83	757.7	32	0.0	79	NW	4	1.8			10s			0	0	Cloudy	
St. Marks, Fla.			30.05	763.3	46	7.8	85	NW	7	3.1			10s		NW	0.02	0.5	Cloudy	
St. Paul, Minn.			29.98	761.5	−7	−21.7	79	W	8	3.6		0	1s			Inap.	Inap.	Clear	
St. Paul's Island, Alaska																			
Thatcher's Island, Mass.			29.24	742.7	39	3.9	100	E	44	19.7			10n		E	0.92	23.4	Heavy rain	
Toledo, Ohio			29.57	751.1	34	1.1	79	SW	16	7.2			10s		SW	0	0	Cloudy	
Tucson, Arizona	27.57	700.3	30.12	765.0	39	3.9		SE				2c	0	NW		0	0	Clear	
Tybee Island, Ga.			29.92	760.0	47	8.3	77	W	16	7.2			10ks		NW	0.45	11.4	Cloudy	
Vicksburg, Miss.			30.04	763.0	34	1.1	100	SW	5	2.2		2ks	Fog			0	0	Fair	
Virginia City, M. T.	24.17	613.9	29.65	753.1	15	−9.4	82	NE	9	4.0		1c	0	NW		0.08	2.0	Clear	
Washington, D. C.			29.43	747.5	32	0.0	89	W	5	2.2			10s		SW	1.41	35.8	Cloudy	
Wilmington, N. C.			29.77	756.1	46	7.8	85	W	14	6.3			10s		W	0.39	9.9	Cloudy	

UNITED STATES SERIES.—Continued.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Wood's Holl, Mass.	.....	.....	29.26	743.2	40	4.4	91	SE	29	13.0	.....	.....	10n	.....	SE	0.21	5.3	Light rain...	
Yankton, Dakota	23.83	732.3	30.28	769.1	0	—17.8	84	NW	22	9.8	.....	.....	10n	.....	.....	0.10	2.5	Light snow.	
Yuma, Arizona	.....	.....	30.00	762.0	52	11.1	.....	W	.....	.....	.....	0	2s	.....	W	0	0	Fair	
Sub-Series.																			
Kingston, Jamaica, W. I.	.....	.....	30.18	766.6	76	24.4	81	Calm	0	0	.....	5c	2s	.....	.....	0.04	1.0	.....	James Gall.
Navassa, W. I.	.....	.....	.....	.....	79	26.1	.....	E	.....	.....	3	.....	.....	.....	.....	0	0	Clear	F. M. Everett.
Clifton, Ja., W. I.	27.20	690.9	30.03	762.7	63	17.2	94	S	0.5	0.2	.....	2c	0	S	.....	2.05	52.1	Fine, Clear.	C. Partridge.
Paramaribo, D. Guiana, S.A.	.....	.....	30.02	762.5	79	26.1	87	E	.....	.....	2	0	0	.....	.....	0	0	Clear	C. J. Hering.
Batavia, Dutch Guiana, S.A.	30.08	764.0	.....	.....	77.9	25.5	.....	E	.....	.....	.....	.....	.....	.....	.....	0	0	Fair	Dr. H. Groot.
Medellin, Colombia, S. A.	25.20	640.1	.....	.....	66.5	19.2	82	SW	.....	.....	1	6cs	3ks	.....	.....	0	0	Cloudy	Thomas Herran.
York Factory, B. A.	.....	.....	30.02	762.5	—37.0	—38.3	.....	N	5	2.2	.....	4c	0	N	.....	0	0	Fair	J. Fortescue, W. Wood.
Honolulu, Oahu, H. I.	.....	.....	30.02	762.5	73	22.8	95	SSE	.....	.....	5	.....	.....	.....	.....	0	0	Hazy	Daniel Smith.
Makawao, Maui, H. I.	.....	.....	29.80	756.9	60	15.6	77	Calm	.....	.....	0	4c	0	S	.....	0	0	.....	F. L. Clarke.

Marine Series.	True course toward—	Hourly rate in knots.	State of ocean.	Direction of swell from—	Weather.	Observer.
Schooner Addie Fuller, * Tarpaulin Cove.	.....	.....	.....	.....	Light rain...	Capt. James Jorgensen.

NOTE.—The originals give the cloudiness by the scale 0 to 4, except York Factory, Medellin and Paramaribo. The elevation of the barometer at Bismarck is 1,077 *feet*, or 511.1 meters; Cheyenne, 6,057.3 ft., or 1,846.2 m.; Clifton, about 2,892 ft., or 881.5 m.; Denver, 5,135 ft., or 1,565.2 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Florence, 1,550 (?) ft., or 472.5 (?) m.; Makawao, 2,205 ft., or 672.1 m.; Morgantown, 1,027.9 ft., or 313.3 m.; Medellin, 4,876 ft., or 1,486.2 m.; Mt. Washington, 6,285 ft., or 1,915.6 m.; North Platte, 2,846 ft., or 867.4 m.; Omaha, 1,054.6 ft., or 321.4 m.; Pike's Peak, 14,150.7 ft., or 4,313.1 m.; Salt Lake City, 4,362.2 ft., or 1,329.6 m.; Santa Fé, 6,862.2 (?) ft., or 2,091.6 (?) m.; Tucson, 2,513 (?) ft., or 772.1 (?) m.; Virginia City, 5,480 (?) ft., or 1,670.3 (?) m.; Yankton, 1,278 ft., or 389.5 m. The following constants are added in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Denver, 5.22 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fé, 6.54 in.; Tucson, 2.60 in.; Virginia City, 5.48 in. The elevation of Batavia is about 6 feet; the barometric readings need the addition of 0.2 mm. or 0.01 in. for reduction to sea-level. * Precipitation from 10 p. m. of the 6th until 10 a. m. of the 7th 0.74 in., or 18.8 m.m.

UNITED STATES NAVAL SERIES.

By authority of the **SECRETARY OF THE NAVY.**

Furnished by the coöperation of the Navy Department, through Commodore Daniel Ammen, U. S. N., Chief of Bureau of Navigation.

STATIONS AND VESSELS.	True course toward—	Hourly rate in knots.	*Barometer as reported.		Temperature of the Air.		Relative Humidity.	Wind.				Clouds.				Rain-fall or melted snow in the past 24 hours.		State of Ocean.	Direction of swell from—	Weather.	Observer.
								Direction.	Velocity		Force.	Amount.		Direction.							
												Up'er	Low'r	Up'er	Low'r						
			Inches.	Millimeters.	Fahrenheit.	Centigrade.	Per cent.	From—	Miles per hour.	Meters per second.	0—10.	0—10.	0—10.	From—	From—	Inches.	Millimeters.				
Naval Academy, Annapolis, Md.			29.08	738.6	33	0.6	82	W			4		5		W	0.90	22.9			Cloudy	
Navy Yard, Norfolk, Va.			29.70†	754.4†	39	3.9		WSW			6		9kn		NE					Squally	
Navy Yard, Pensacola, Fla.			30.12	765.0	46	7.8		WNW			2		10							‡D. clouds	
Navy Yard, Portsmouth, N.H.			29.30	746.5	36	2.2		NE			6		10							Rainy	
Navy Yard, Wash'gton, D. C.			29.59	751.6	33	0.6							10							Overcast	
Alarm, New York, N. Y.			28.28†	718.3†	41	5.0		SW			2		10		N	1.50	38.1			Rain and fog	
Colorado, New York, N. Y.			29.23	742.4	41	5.0		SSW			3		10		NE	0.875	22.2			Rain and fog	
Despatch, Wash'ngton, D. C.			29.49†	749.0†	32	0.0		WSW			2		10							Overcast	
Franklin, New York, N. Y.			29.23	742.4	45.0	7.5	100	WSW			2		10					Smooth		Rain and fog	
Intrepid, New York, N. Y.			29.19	741.4	41	5.0		SW			1		10		N	1.25	31.7			Foggy	
Minnesota, New York, N. Y.			29.27	743.4	40	4.4	82	SW			2		10							Rain and fog	
Monongahela, Baltimore, Md.			29.38	746.2	36	2.2		W			3-4		..cs		E	Blan'k	Blank			‡D. clouds	
Santee, Annapolis, Md.			29.08†	738.6†	38	3.3	100	W			4		5		W					Cloudy	
St. Louis, League Island, Pa.			29.19	741.4	39	3.9		SW			5		10		NE	0.360	9.27			Overcast	
Swatara, New York, N. Y.			30.04	763.0	40	4.4		Calm			0		10n							Rain and fog	
Talapoosa, Washington, D. C.			29.31	744.5	31	— 0.6		SW			3		10			1.125	28.58			‡D. clouds	
Wabash, Boston, Mass.			29.38	746.2	35	1.7		E			5		10		W					Raining	

* It is not known that the barometer is corrected for temperature, instrumental error or elevation. † Aneroid Barometer. ‡ Detached clouds.

COLLATED AT THE OFFICE OF THE CHIEF SIGNAL OFFICER OF THE ARMY, WASHINGTON, D. C.

The records which appear in this Bulletin are copied from the regular exchanges of this office, made in each instance in compliance with an especial request, and are published for the uses of the coöperating observers. The barometric readings in the first two columns are reduced to freezing and their respective standards; those in the second two also to mean sea-level. The "weather" is generally published as given.

When the distinction between the upper and lower strata of clouds is not reported, the *kinds* or *types*, viz: cirrus, cumulus, stratus, nimbus, scud, fracto, pallio, haze, fog and smoke, as indicated, respectively, by the letters c, k, s, n, d, f, p, hz., fg. and sm'e, are generally published with the amount in the lower-cloud column. The distinction between the upper and lower strata is carefully made in the United States Series and a portion of the Canadian Series, and the types are indicated by the above letters or their combinations in the proper column.

Albert J. Myer

Brig. Gen. (Bvt. Assg^d.,) Chief Signal Officer, U. S. A.

BULLETIN

OF

INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON JANUARY 8, 1877.

7:35 A. M. WASHINGTON mean time.

6:7 A. M. MEXICO mean time.
7:7 A. M. SAN JOSE mean time.
0:6 P. M. LISBON mean time.
0:28 P. M. MADRID mean time.
0:43 P. M. GREENWICH mean time.
0:53 P. M. PARIS mean time.
1:1 P. M. BRUSSELS mean time.
1:4 P. M. UTRECHT mean time.
1:13 P. M. BERNE mean time.
1:26 P. M. CHRISTIANIA mean time.
1:33 P. M. COPENHAGEN mean time.
1:33 P. M. ROME mean time.
1:37 P. M. BERLIN mean time.
1:49 P. M. VIENNA mean time.
1:55 P. M. STOCKHOLM mean time.
2:18 P. M. ATHENS mean time.
2:39 P. M. CONSTANTINOPLE mean time.
2:44 P. M. ST. PETERSBURG mean time.

ALGERIAN SERIES.

Furnished by the coöperation of General d'Eudeville, Commandant Supérieur du Génie in Algeria.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Nemours			29.98	761.4	79.5	26.4	20	SSE			5		7			0	0	Cloudy	Charnot.
Algiers			30.15	765.7	64.6	18.1		SW			2		4			0	0	Fair	Peter.
La Calle			30.17	766.4	73.0	22 8	71	S			3		1			0	0	Clear	Fleury.
Tunis			30.30	769.6	57.2	14.0		W			3		2			0	0	Clear	Jacques.
Sfax																			
Saida			30.16	766.1	64.8	18.2	36	SSW			5		2			0	0	Clear	Millot.
Tebessa			30.29	769.3	66.9	19.4		W			1		0			0	0	Clear	Bourgeois.
Geriville			30.22	767.5	52 0	11.1	41	S			2		1			0	0	Clear	Lemaillot.
Laghouat			30.28	769.0	65.7	18.7	24	S			2		1			0	0	Clear	Guyot.
Biskra			30.37	771.4	64.8	18.2	46	NE			1		0			0	0	Clear	Kuntz.

NOTE.—In the originals the distinction between the amount of upper and lower clouds is apparently not made. The weather is published as given. The rain-fall is measured at 7 a. m., local time.

AUSTRIAN SERIES.

Furnished by the coöperation of Professor Ferdinand Osnaghi, Director of the Imperial and Royal Central Meteorological Institute at Vienna.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Agram			30.21	767.4	58.5	14.7	77	SW			3		3			0	0		Prof. Ivan Stozir.
Cracow, I. R. Observatory			30.18	766.6	46.0	7.8	83	NE			1		0			0	0		Dr. Wierzbiski.
Eperies			30.22	767.5	43 2	6.2	94	S			4		9			0.010	0.25	Foggy	Julius Mikolik.
Gratz	28.95	735.2	30.23	767.7	45.5	7.5	79	W			2		1			0	0		Andreas Rospini.
Hermannstadt	28.83	732 8	30.29	769.3	45.0	7.2	77	SE			1		3			0	0		Prof. Reissenberger.
Kremsmünster	28.71	729.1	30.12	765.0	30.9	— 0.6	96	E			1		10			0	0		Prof. C. Wagner.
Lemberg			30.16	766.1	50.7	10.4	70	S			2		1			0	0		Dr. T. Stanecki.
Nyiregyhaza																			Habzsuda Daniel.
Pola			30.33	770.4	52.0	11.1	87	Calm			0		10s			0	0	Foggy	I.R.Hydrographic Office.
Szegedin			30.24	768.0	58.1	14.5	76	S			1		0			0	0		Karl Stancel.
Trieste			30.36	771.0	48.9	9.4	98	Calm			0		10			0.114	2.9	Raim and fog	Prof. V. Farolfi.
Vienna			30.20	767.1	37.4	3.0	100	W			1		10			0	0	Foggy	I. R. Central Met. Obs'y.

NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 7 p. m., local time. The elevation of Gratz is 343.5 meters, or 1,126.9 feet; Hermannstadt, 407.8 meters, or 1,337.9 feet; Kremsmünster, 383.6 meters, or 1,258.5 feet.

BELGIAN SERIES.

Furnished by the coöperation of J. C. Houzeau, Director of the Royal Observatory at Brussels.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Arlon			29.80	757.0	53.1	11.7	9[illegible]	SW			2		5		SW	0.016	0 4	Raining	Royal Observatory.
Brussels			29.63	752.6	52.9	11.6	82	S			2		10			0.356	9.05		
Furnes			29.52	749.8	51.3	10.7	93	SSW			2		8			0.528	13.4		
Maeseyck			29.66	753.4	55.2	12.9	77	S			3		10			0.181	4.6		

NOTE.—In the originals, the weather is occasionally given in general notes.

BRITISH SERIES

Furnished by the coöperation of Robert H. Scott, Esq., Director of the Meteorological Office, London, Alexander Buchan, Secretary of the Scottish Meteorological Society, Edinburgh, and the respective Observers.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Force. 0—10.	Clouds. Amount. Upper. 0—10.	Clouds. Amount. Lower. 0—10	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Aberdeen			29.15	740.4	44.9	7.2		SSW	19	8.5			2			0.050	1.27	Blue sky	William Boswell.
Ardrossan			29.22	742.2	48	8.9		SW			3		6					*D. clouds	William McNeil.
Armagh, Observatory			29.23	742.4	46.9	8.3		S	13	5.8			6					*D. clouds	S. Call, for Dr. Robinson
Birr Castle, (Parsonstown)			29.18	741.2	47.8	8.8		SE			1		7					Showery	J. Dreyer.
Bradford			29.38	746.2	48.3	9.1		SE			0		8			0.27	6.9	*D. clouds	J. McLandsborough.
Bridgetown, (Barbados)			30.08	764.0	80.5	26.9		NE			2		5					*D. clouds	Sergt. J. F. Halanen, A.
Cambridge, Observatory			29.45	748.0	50.0	10.0		S			2		10					Raining	H. Todd. [H.C.
Cardington			29.45	748.0	50.0	10.0		S			1		10					Foggy	John McLaren.
Carlisle																			T. Bell, for J. Cartmell.
Chatham, School M. E.			29.63	752.6	49.7	9.8		SW			1		0?					Drizzling?	Maj. C. N. Martin, R.E.
Dartmoor	27.97	710.4	29.47	748.5	46.6	8.1		S			2		10					Raining	R. E. Power.
Davos Platz, (Switzerland)	24.96	634.0			41.5	5.3	74	SW			1		8			0	0	*D. clouds	Francis Redford, M. A.
Donaghadee			29.23	742.4	45	7.2		SSW			4		3					*D. clouds	J. Mac Gowan.
Dover			29.50	749.3	50	10.0		S			3		9					Drizzling	J. Costello.
Eccles, (near Manchester)			29.36	745.7	48.2	9.0		SE	5.2	2.3			8					*D. clouds	Thomas Mackereth.
Falmouth, Observatory			29.30	746.5	52.3	11.3		SSW			1		10					Foggy	The Staff.
Fort Napier, (Natal)	27.68	703.1	29.92	760.0	79.6	26.4		E			2		0					Blue sky	P'vt. G. Salmon, A. H. C
Free Town, (Sierra Leone)			29.96	761.0	82.0	27.8		N			0		5					*D. clouds	
Galway, Queen's College			29.12	739.6	45	7.2		SW			3		5					*D. clouds	Prof. A. H. Curtis.
Gibraltar, (Mediterranean)			29.96	761.0	67.5	19.7		NE			3		3					*D. clouds	Corpl. C. Aitken, A.H.C.
Glasgow, Observatory			29.21	741.9	47.3	8.5		SW			3		8					*D. clouds	Lewis Stuart.
Great Yarmouth			29.50	749.3	48	8.9		S			4		8					Drizzling	G. T. Watson.
Greenwich, Royal Obs'y			29.48	748.8	49.5	9.7		S			1		10					Raining	The Staff, for G. B. Airy.
Guernsey			29.46	748.3	50.5	10.3		SE			0		10					Rain and fog	Dr. S. E. Hoskins.
Helston			29.38	746.2	53	11.7		S			4		10			0.16	3.8	Overcast	M. P. Moyle.
Holyhead			29.30	744.2	50	10.0		S			3		2					Blue sky	John Tilston.
Kew, Observatory			29.48	748.8	50.7	10.4		S	5	2.2			10					Raining	The Staff.
Kingstown			29.26	743.2	50	10.0		SE			3		6					*D. clouds	George Mitchell.
Leicester Museum			29.44	747.8	50.0	10.0		SW			2		10					Overcast	Wm. J. Harrison, F.G.S.
Malta, (Mediterranean)			30.30	769.6	62.6	17.0		SE			2		2k					*D. clouds	Corp'l. P. Bravis, A.H.C.
Nairn																			W. D. Penny.
Nassau, (Bahamas)			30.04	763.0	71.8	22.1		NE			1		8					Overcast	Surg. Maj. Henry.
Nottingham, Observatory			29.44	747.8	50.7	10.4		S			3		10d		SSW	0.017	0.43	Overcast	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			29.41	747.0	48.8	9.3		S			2		10					Overcast	Rev. Stephen Whitty.
Oxford, Radcliffe Obs'y			29.44	747.8	50	10.0		SSE			1		10					Gloomy	J. Lucas.
Plymouth			29.30	746.5	52.0	11.1		S			1		10					Overcast	John Merrifield.
Roche's Point			29.21	741.9	51	10.6		SSW			6		5					Cloudy	W. Kennedy.
Saint Ann's Head			29.32	744.7	51	10.6		SSW			2		8					Overcast	John C. Walker.
Saint Helier, (Jersey)			29.43	747.5	51.2	10.7		SSE			3		10					Raining	A. P. Amy.
Sandwick Manse, (Orkneys)			28.99	736.3	43.8	6.6		WSW	5	2.2			10					Overcast	Rev. C. Clouston, LL. D.
Scarborough																			F. Shaw.
Scutari Cemetery, (Turkey)			30.23	767.8	53.8	12.1		NE			1		9					Hazy	Sergt. W. H. Lyne.
Sheffield			29.39	746.5	48.6	9.2		SW			2		10			0	0	Overcast	W. F. Cooper.
Silloth Rectory			29.30	744.2	51.1	10.6	84	SW			5		3			0.115	2.92	*D. clouds	Rev. Francis Redford
Stonyhurst, Observatory			29.37	746.0	45.4	7.4		S			1		6c,k					Blue sky	Rev. S. J. Perry.
Stornoway, Lews C., (Hebr.)			29.12	739.6	44	6.7		NNE			4		8					*D. clouds	John Smith.
Stratfield Turgiss			29.48	748.8	49.4	9.7		SE			1		10					Raining	Rev. Charles H. Griffith.
Thurso			28.98	736.1	42	5.6		WSW			3		7					Gloomy	John Trotter.
Truro, Royal Institution			29.39	746.5	52	11.1		S			4		10					Raining	W. Newcombe.
Valencia, Observatory			29.18	741.2	50.4	10.2		WSW	17	7.6			5					*D. clouds	The Staff.
SUB-SERIES.																			
Calf of Man, (Isle of Man)					50	10.0		S			4		3			0	0		Henry Mercer.
Cape Good Hope, Obs'y			29.93	760.2	84.4	29.1	47	SSE	9	4.0		0	0						The Staff, for E. J. Stone.
Hobart Town, (Tasmania)			29.74	755.4	67.5	19 7	94	NW			3		4k			0	0		Francis Abbott, F.R.A.S.
Leith, Restalrig Park			29.24	742.7	49.0	9.4		W			4		10k			0.17	4.3	Fine	Andrew Gibb.
Mauritius, Observatory			29.93	760.2	84.6	29.2	60	N	14.2	6.3		1	4		N	0	0	*D. clouds	C. Meldrum.
Melbourne, Observatory			30.02	762.5	61.4	16.3	76	S	13	5.8			9			0	0	Fine	R. L. J. Ellery.
Monach L't-house, (Hebrides)			29.21	741.9	45	7.2		N			4		10			0.2	5.1		J. Youngclause.
North Unst, (Shetland Is.)			28.96	735.6	45	7.2		S			3	10	10	N		Blank	Blank		Robert Burnet.

NOTE.—Generally, the originals do not give the relative humidity, rain-fall, or distinction between upper and lower clouds. The originals give the wind direction to 32 points and weather by the Beaufort notation. The originals give the barometer for Aberdeen, Cardington, Galway, Oxford, St. Helier, Sandwick, Scarborough, Stonyhurst, Leith, Monach and North Unst as read off and the cloudiness for Stornoway by the scale 0 to 4. The wind-force is given by the scale 0 to 12 in the official series; 0 to 6 in the sub-series; except in lbs. per square foot for Greenwich and Hobart Town. The rain-fall is measured at Aberdeen at 10 a. m.; Bradford, 9 a. m.; Hobart Town, 7:30 a. m.; Nottingham, 6 p. m.; Mauritius, 9 a. m., local time. The elevation of Dartmoor is 1,400 feet, or 426.7 meters; Davos Platz, 5,105? feet, or 1,556.0? meters; Fort Napier, 2,200 feet, or 670.6 meters. *Detached clouds.

By authority of the MINISTER OF FOREIGN AFFAIRS.

COSTA RICA SERIES.

Furnished by the coöperation of Senor Federico Maison, Director of the Central Office of Statistics and Meteorology.

San José																			

DANISH SERIES.

Furnished by the coöperation of Captain N. Hoffmeyer, Director of the Royal Danish Meteorological Institute at Copenhagen.

Copenhagen			29.77	756.1	41.0	5.0	92	SSW			2		10					Foggy	
Fanöe			29.65	753.1	40.5	4.7	97	SW			6		10					Raining	
Godthaab, (Greenland)			29.58	751.2	20.3	— 6.5	90	Calm			0		10					Snowing	
Stykkisholm, (Iceland)			29.89	759.3	8.1	—13.3	92	E			4		0						
Thorshavn, (Faröe)			29.43	747.4	32.7	0.4	78	NE			7		10					Snowing	
Vestervig			29.58	751.4	39.6	4.2	100	SSW			4		10						

NOTE.—The originals give the wind-force by the scale 0 to 6; occasionally, weather by Vienna symbols; no distinction between the amount of upper and lower clouds.

FRENCH SERIES.

Furnished by the coöperation of His Excellency, U. J. Le Verrier, Director of the Paris Observatory, and the respective Observers.

STATIONS.	Barometer, corrected for instrum'tal error and temperature. Inches.	Barometer, corrected for instrum'tal error and temperature. Millimeters.	Barometer, reduced to sea-level. Inches.	Barometer, reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Alengon	.....	.....	29.55	750.5	50.0	10	90	S	.....	.....	3	.....	10	.....	.....	0.08	2.	Covered	Normal School.
Amiens	.....	.....	29.61	752.0	51.4	10.8	98	SW	.....	.....	2	.....	10	.....	.....	0.402	10.2	Covered	Normal School.
Avignon	.....	.....	30.12	765.1	61.5	16.4	61	SE	.....	.....	4	.....	10	.....	.....	0.071	1.8	Lightly cov.	Normal School.
Bar-sur-Seine	.....	.....	29.75	755.6	61.0	16.1	58	SW	.....	.....	4	.....	8n	.....	SW	0.024	0.6	Very cloudy	C. Saillard.
Beaumette, (near Angers)	.....	.....	29.51	749.5	60.6	15.9	61	S	49.7	22.2	.....	.....	.....	.....	SW	0	0	.....	Beaumette Observ'tory.
Beauvais	.....	.....	29.62	752.3	51.8	11	85	SSE	.....	.....	3	.....	10	.....	SW	0.089	2.25	Covered	Normal School.
Besançon	.....	.....	29.89	759.2	57.2	14	67	S	.....	.....	3	.....	8	.....	SW	0	0	Very cloudy	Normal School.
Bourg en Bresse	.....	.....	30.05	763.2	60.4	15.8	73	.....	.....	.....	4	.....	5cn	.....	N	0	0	Cloudy.....	Normal School.
Bourges	.....	.....	29.68	753.9	62.6	17	61	SSE	.....	.....	2	.....	2	.....	S	0	0	Slightly cl'dy	Normal School.
Brest	.....	.....	29.37	746.0	49.8	9.9	92	SE	.....	.....	1	.....	10	.....	SE	0.059	1.50	Raining.....	Naval Observatory.
Carcassonne	.....	.....	29.96	760.9	56.3	13.5	86	E	.....	.....	6	.....	10	.....	W	0	0	Covered.....	Normal School.
Caen	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Chartres	.....	.....	29.61	752.2	53.2	11.8	93	S	.....	.....	4	.....	10	.....	.....	0.177	4.5	Covered	Normal School.
Châlons-sur-Marne	.....	.....	29.73	755.1	57.9	14.4	67	S	.....	.....	3	.....	10n	.....	N	0.039	1.0	Covered	Normal School.
Clermont	.....	.....	29.80	756.8	60.8	16.0	50	S	.....	.....	6	.....	5	.....	S	0	0	Cloudy,. ..	Puy de Dome Obs'y.
Commercy	.....	.....	29.82	757.3	55.4	13	70	S	.....	.....	2	.....	5ns	.....	S	0.098	2.5	Cloudy.....	Normal School.
Commune de Gréasque*	.....	.....	30.02	762.5	54.9	12.7	72	E	.....	.....	6	.....	8	.....	SE	0.150	3.8	.....	M. Kina.
Grenoble	.....	.....	30.21	767.3	61.0	16.1	83	SSW	.....	.....	8	.....	5	.....	N	0	0	Cloudy.....	Normal School.
La Roche-sur-Yon	.....	.....	29.56	750.7	58.3	14.6	76	SE	.....	.....	8	.....	8	.....	NE	0.197	5.0	Very cloudy	Normal School.
Le Mans	.....	.....	29.56	750.9	55.2	12.9	79	SW	.....	.....	4	.....	8	.....	SW	0.24	6.	Very cloudy	Normal School.
Lons-Le-Saulnier	.....	.....	29.89	759.1	63 5	17.5	52	SE	.....	.....	6	.....	2	.....	E	0	0	Slightly cl'dy	Normal School.
Lorient	.....	.....	29.47	748.5	53.6	12.0	93	S	.....	.....	2	.....	10	.....	.....	1.067	27.1	Raining.....	Naval Observatory.
Mâcon	.....	.....	30.02	762.4	59.9	15.5	76	SSE	.....	.....	6	.....	5	.....	SSW	0	0	Cloudy.....	Normal School.
Metz	.....	.....	29.88	758.9	55.2	12.9	65	SE	.....	.....	2	.....	10	.....	SE	0.091	2.3	.....	M. Schuster.
Mirecourt	.....	.....	29.89	759.3	55.4	13	79	S	.....	.....	8	.....	10	.....	NW	0	0	Covered	Normal School.
Nismes	.....	.....	30.10	764.4	59.4	15.2	75	S	.....	.....	1	.....	10	.....	NW	0	0	Covered	Normal School.
Orleans	.....	.....	29.61	752.1	58.3	14.6	72	SE	.....	.....	1	.....	8	.....	E	0.047	1.2	Very cloudy	Normal School.
Paris, Observatory	.....	.....	29.64	752.8	54.0	12.2	78	SSW	.....	.....	3	.....	10k	.....	SW	0.183	4.66	Rainy.....	National Observatory.
Parthenay	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Privas	.....	.....	30.13	765.3	55.0	12.8	.....	SSE	.....	.....	2	.....	10	.....	SSE	0.205	5.2	Covered	Normal School.
Rochefort, Observatory	.....	.....	29.60	751.7	60.4	15.8	62	S	.....	.....	6	.....	10	.....	NNE	0	0	Covered	Naval Observatory.
Rouen	.....	.....	29.56	750.9	52.2	11.2	90	SE	.....	.....	1	.....	10	.....	.....	0	0	Covered	Normal School.
Saint Lo	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Tarbes	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Villefranche	28.07	728.1	29.70	754.4	70.7	21.5	70	ESE	.....	.....	2	.....	2	.....	E	0	0	Slightly cl'dy	Normal School.
	.....	.....	29.89	759.3	60.8	16	73	SE	.....	.....	6	.....	8	.....	SW	0.04	1.	Very cloudy	Normal School.
SUB-SERIES.																			
Fort de France, Martinique	.....	.....	29.93	760.2	75.6	24.2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	L'Abbé Marchési.
Marseilles	.....	.....	30.14	765.5	60.4	15.8	69	SE	.....	.....	2	.....	8	.....	.....	0.008	0.2	Covered	Marseilles Observatory.
Mont-Louis	24.82	630.5	30.14	765.5	51.8	11.0	48	SSW	46.6	20.83	.....	.....	8	.....	SW	0	0	.....	—. Falguère.
Montsouris, Paris	.....	.....	29.64	752.8	54.0	12.2	81	SSE	.....	.....	3	.....	10	.....	S	0.169	4.3	Light rain...	Montsouris Observatory
Perpignan	.....	.....	29.94	760.4	62.1	16.7	56	NE	3.7	1.67	.....	.....	9	.....	NW	0	0	.....	Dr. Fines.
Pic du Midi, (Summit,) H. P.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. Baylac.
Pic du Midi, (Plantade,) H. P.	22.43	569.7	.....	.....	41.0	5.0	.....	SW	.....	.....	8	.....	5	.....	.....	0	0	Fair.....	General de Nansouty.
Saint Maur, (near Paris)	.....	.....	29.64	752.8	55.4	13.0	77	SSE	.....	.....	2	... ...	10	.....	.....	0.146	3.7	Covered	E. Renou.
Toulouse	.....	.....	29.84	758.0	60.6	15.9	73	SSE	.....	.....	4	.....	9	.....	.....	0	0	.....	Toulouse Observatory.
Tours	.....	.....	29.60	751.9	61.9	16.6	61	SSW	.....	.....	3	.....	10	.....	W	0.083	2.1	.....	C. Marquet.
Versailles, (near Paris)	.....	.....	29.63	752.6	55.0	12.8	77	S	.....	.....	2	.....	10	.....	.....	0.198	5.04	Covered	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai)	.....	.....	30.53	775.5	31.8	— 0.1	83	ENE	2.4	1.08	.....	.....	0	.....	.....	0	0	.....	Marc Dechevrens, S. J.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—Generally, the originals give the wind-force by the scale 0 to 7; no distinction between upper and lower clouds, and, in the official series, the amount by the scale 0 to 4; the rain-fall as measured at 7, 8 or 9 a. m., local time; at Clermont, 9 a. m. of the following day; the weather in general terms as published. The elevation of Mont-Louis is 1,686.40 meters, or 5,204.8 feet; Clermont, 388 meters, or 1,272.9 feet; Commune de Gréasque, 322 meters, or 1,056.4 feet; Pic du Midi, (Summit,) 2,877 meters, or 9,439.1 feet; Pic du Midi, (Plantade,) 2,366 meters, or 7,762.6 feet; Tarbes, 308 meters, or 1,010 feet. In correcting the Mont-Louis barometric observations for altitude, the constant 135. millimeters has been added. *Bouches-du-Rhône

GERMAN SERIES.

Furnished by the coöperation of Professor Dr. G. Neumayer, Director of the German Naval Observatory, Hamburg.

Bamberg	.....	.....	29.94	760.5	47.3	8.5	62	W	.....	.....	2	.....	4	W	.....	0	0	.....	Prof. T. Hoh
Berlin	.....	.....	29.95	760.7	48.7	9.3	80	S	.....	.....	1	.....	3	.....	.....	0.008	0.2	.....	Prof. Arndt.
Breslau	.....	.....	30.10	764.5	48.7	9.3	76	SSE	.....	.....	3	.....	3	.....	.....	0	0	Foggy	Royal University Obs'y.
Carlsruhe	.....	.....	29.87	758.8	54.3	12.4	67	WSW	.....	.....	1	.....	9	.....	.....	0	0	.....	A. Senz.
Cassel	.....	.....	29.87	758.8	52.9	11.6	75	SE	.....	.....	3	.....	10	SW	.....	0.024	0.6	.....	Dr. H. Möhl.
Crefeld	.....	.....	29.68	753.8	54.7	12.6	76	SE	.....	.....	4	.....	9	.....	.....	0	0	.....	Director Lose.
Emden	.....	.....	29.74	755.5	47.8	8.8	95	S	.....	.....	2	.....	10	.....	.....	0.165	4.2	.....	Prof. Prestel.
Frankfort on the Main	.....	.....	29.89	759.1	50.0	10.0	74	SE	.....	.....	1	.....	7	.....	.....	0.028	0.7	.....	Physical Society.
Friedrichshafen	28.57	725.6	30.02	762.5	48.4	9.1	78	N	.....	.....	3	.....	6	.....	.....	0	0	.....	M. Wilhelm.
Hamburg	.....	.....	29.80	757.0	47.8	8.8	89	S	.....	.....	2	.....	9ks	SW	.....	0.012	0.3	Pleasant.....	Captain F. Hegemann.
Kiel	.....	.....	29.75	755.6	46.2	7.9	93	SW	.....	.....	2	.....	10	.....	.....	0.142	3.6	Heavy rain..	Prof. G. Karsten.
Königsberg, (Prussia)	.....	.....	29.97	761.3	40.6	4.8	86	S	.....	.....	2	.....	5	.....	.....	0	0	.....	Prof. E. Luther.
Koslin	.....	.....	29.97	761.3	40.6	4.8	86	S	.....	.....	2	.....	5	.....	.....	0	0	.....	H. Müller.
Leipsic	.....	.....	29.97	761.2	45.5	7.5	.....	S	.....	.....	2	.....	5	.....	.....	0	0	.....	Prof. Bruhns.
Memel	.....	.....	29.98	761.4	51.1	10.6	69	S	.....	.....	3	.....	7	.....	.....	0	0	.....	Reinbrecht & Skalweit.
Münster	.....	.....	29.97	761.1	37.0	2.8	94	S	.....	.....	3	.....	9ks	SW	.....	0	0	.....	Prof. E. Heis.
Neufahrwasser	.....	.....	29.70	754.4	55.2	12.9	77	SW	.....	.....	3	.....	10	.....	.....	0.087	2.2	.....	A Lothe.
Posen	.....	.....	29.98	761.6	40.8	4.9	84	S	.....	.....	2	.....	7	WSW	.....	0.036	0.9	.....	Dr. Magener.
Strassburg, (in Alsace)	.....	.....	30.04	763.0	45.1	7.3	79	SSE	.....	.....	2	.....	7	.....	.....	0	0	.....	Dr. Schur.
Stuttgart	.....	.....	29.91	759.7	54.3	12.4	59	SW	.....	.....	1	.....	10	SW	.....	0	0	.....	Prof. Schoder.
Thorn	.....	.....	29.94	760.4	37.7	14.3	43	W	.....	.....	1	.....	6	.....	.....	0	0	.....	Dr. Hasenbalg.
Treves, (Trier)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Prof. Flesch.
Weissenburg, (Bavaria)	28.49	723.7	29.74	755.3	57.9	14.4	63	SW	.....	.....	7	.....	10	.....	.....	Inap.	Inap.	.....	Dr. von Bebber.
Wustrow, Naval School	.....	.....	30.01	762 2	49.5	9.7	50	SSE	.....	.....	1	.....	8	SW	.....	0	0	.....	E. F. Schütz.
			29.87	758.8	43.5	6.4	91	S	.....	.....	4	.....	10	.....	.....	0	0	.....	
GERMAN NAVAL SERIES.																			
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—The elevation of Friedrichshafen is 413.4 meters, or 1,356.8 feet; Weissenburg, 431 meters, or 1,414.0 ft. In the originals the distinction between the amount of upper and lower clouds is not made. It is not always certain that the remarks in the weather column refer to the moment of observation.

GREEK SERIES.

Furnished by the coöperation of Professor Dr. J. F. Julius Schmidt, Director of the Royal Observatory at Athens.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er. 0—10.	Clouds. Amount. Low'r. 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Athens			30.26	768.6	60.8	16.0		NE										⅛clear	

Note.—The originals give the barometer corrected, but not reduced to sea-level; occasionally the kind of clouds; the weather as published. They omit the humidity, wind-force, amount of cloudiness and rain-fall.

ITALIAN SERIES.

Furnished by the cooperation of His Excellency the Minister of Agriculture, Industry and Commerce, and the respective Observers.

Udine			30.32	770.1	48.6	9.2	89	SE	0.7	0.3			10			0.051	1.3	Raining	Prof. Giovanni Clodig
Stelvio	22.24	564.9	30.34	770.7	28.9	— 1.7		W			8		10			0	0		Signora Ernesta Manfredi.
Valdobbia	22.31	566.6	30.35	771.0	29.5	— 1.4	91	NW			2		10					Snowing	Ab. Dom. Mongini.
Padua			30.33	770.3	48.9	9.4	91	Calm	0	0			10	WSW		0	0		Prof. Dott. Lorenzoni.
Vicenza			30.33	770.4	48.9	9.4	89	NE	0	0			6	W		0	0		Conte Alm. Da Schio.
Verona			30.32	770.1	49.8	9.9	92	W			1		10			0	0		Dott. B. Bertoncelli.
Bergamo	28.95	735.2	30.31	769.8	46.4	8.0	86	N			2		9			0	0		Prof. Trionfini Carlo.
Domodossola			30.36	771.1	43.0	6.1	99	Calm			0		10			0.118	3.0	Raining	Prof. Giuseppe Calza.
Milan			30.32	770.1	48.4	9.1	100	NW			1		10			0	0		Ab. Gio. Capelli.
Pavia			30.34	770.7	46.6	8.1	93	S			1		10			0	0		Prof. Gio. Cantoni.
Moncalieri			30.36	771.1	45.5	7.5	96	NNE	0	0			10			0.047	1.2	Raining	Prof. P. F. Denza.
Mondovi	28.37	720.6	30.35	770.8	45.3	7.4	83	ENE			2		10			0.004	0.1	Light rain	Prof. D. C. Bruno.
Porto Maurizio			30.33	770.3	54.7	12.6	81	N			2		10	E		0.056	1.4	Light rain	Prof. L. Vassallo.
Genoa			30.33	770.3	53.6	12.0	84	NE	0	0			10	S		0.638	16.2	Raining	Prof. G. M. Garibaldi.
Piacenza			30.35	770.9	47.3	8.5	93	NW	3.1	1.4			10			0	0	Foggy	Dott. G. Manzi.
Parma			30.35	770.8	48.2	9.0	96	SE			2		10			0.005	0.1	Light rain	Prof. P. Pigorini.
Florence			30.35	770.9	53.6	12.0	92	NW			2		10	W		0	0		Cav. F. Meucci.
Leghorn			30.31	769.8	57.6	14.2	76	ENE	3.1	1.4			6			0	0		Prof. P. Monte.
Siena	29.09	738.9	30.32	770.2	54.1	12.3	81	ESE	0	0			7	W		0	0		Prof. L. Toscani.
Urbino	28.74	730.0	30.35	770.9	51.8	11.0	76	SSW			2		4			0	0		Prof. P. Serpieri.
Pesaro			30.36	771.1	45.0	7.2	100	NE	0	0			10			0.020	0.5	Foggy	Prof. Luigi Guidi.
Ancona			30.36	771.2	46.4	8.0	94	S			2		10			0	0	Foggy	Prof. F. De— Bosis.
Grosseto			30.33	770.4	58.6	14.8	77	SE			2		6	S		0	0		Avv. P. Pontelelli.
Rome			30.35	770.9	59.2	15.1	75	SSW	1.5	0.6			2	NW		0.06	1.6	Raining	Prof's. P. Secchi & L. Respighi.
Naples, O. U.			30.32	770.2	61.7	16.5	74	SW			2		6	NE		0.03	1.0	Light rain	Prof. L. Palmieri.
Lecce			30.35	770.9	57.9	14.4	85	N	4.9	2.2			3	N		0	0		Prof. C. De—Giorgi.
Cosenza			30.34	770.6	57.0	13.9	71	SE	1.8	0.8			0			0	0		Prof. F. D. Conti.
Cagliari																			Prof. A. Pacinotti.
Riposto, (Sicily)			30.23	767.9	55.4	13.0	77	NE			2		1			0	0		Prof. F. Caflero.
Palermo			30.24	768.2	59.9	15.5	66	NE	2.5	1.1			2			0	0		Prof. G. Cacciatore.
Caltanissetta	28.32	719.2	30.30	769.6	54.9	12.7	64	W			1		0			0	0		Prof. A. Pagani.
Siracusa			30.25	768.4	59.0	15.0	85	NE			1		4	E		0	0		Prof. V. Giuliano.
Sub-Series.																			
Naples, S. R.			30.38	771.6	58.6	14.8	70	NE	0.7	0.3			4	NE		0.051	1.3		Prof. F. Brioschi

Note.—The originals give the wind-force by the scale 0 to 4, or the velocity in kilometers per hour; generally, no distinction between upper and lower clouds; occasionally the weather by the Vienna symbols. The elevation of Stelvio is 2,543.0 meters, or 8,342.9 feet; Valdobbia, 2,548.0 meters or 8,359.3 feet; Bergamo, 379.6 meters, or 1,245.3 feet; Mondovi, 556 meters, or 1,824.2 feet; Urbino, 451 meters, or 1,479.7 feet; Siena, 348.5 meters, or 1,143.3 feet; Caltanissetta, 570.3 meters, or 1,871.0 feet.

Furnished by the cooperation of the Imperial University of Tokei, Japan.

JAPANESE SERIES.

Tokei			30.01	762.2	32.5	0.3		Calm	0	0			0			0	0		Prof. P. V. Veeder.

Note.—The originals give the amount of cloudiness by the scale 0-4 without distinguishing between upper and lower clouds. The rain-fall is measured at 7 a. m. local time.

By authority of the Secretary of Public Works.

MEXICAN SERIES.

Furnished by the coöperation of Senor Mariano Barcena, Director of the Central Meteorological Observatory in the City of Mexico.

Mexico																			Mariano Barcena. Vicente Reyes. Miguel Perez. (Engineers in charge.)

Note.—The elevation of Mexico is 2,290 meters, or 7,512.9 feet. The rain-fall is measured at 6 a. m., local time.

NETHERLANDS' SERIES.

Furnished by the coöperation of Professor Buys Ballot, Director of the Royal Meteorological Institute of the Netherlands at Utrecht.

Flushing			29.61	752.0	49.6	9.8		S			4					0.177	4.5		
Groningen			29.63	752.6	47.8	8.8		S			3					0.150	3.8		
Helder			29.60	751.9	48.0	8.9		S			2					0.882	22.4		
Utrecht			29.60	751.7	50.9	10.5	81	SSE			4		8			0.374	9.5	Very cloudy	

Note.—The originals give the wind-pressure in kilograms per square meter; for Utrecht, they give the weather as published, from which the amount of cloudiness is taken by the scale 0 to 4, without distinguishing between upper and lower clouds. It is assumed that the barometer readings have been reduced to sea-level.

NORWEGIAN SERIES.

Furnished by the coöperation of Professor H. Mohn, Director of the Royal Norwegian Meteorological Institute at Christiania.

Bergen			29.26	743.2	43.3	6.3	86	S	22.8	10.2			10			0.433	11.0	Raining	
Brönö			29.30	744.3	30.2	— 1.0	96	N	17.9	8			10					Snowing	
Christiania			29.48	748.9	33.1	0.6	85	SW	0.9	0.4			10			0.102	2.6		
Tromsö			29.26	743.2	19.8	— 6.8	86	SW	13.4	6			10			0	0		

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols. The cloudiness and weather at Bergen refer to 2h., p. m., local time, instead of 1h., 4 min.

PORTUGUESE SERIES.

Furnished by the coöperation of J. C. de Brito Capello, Director of the Meteorological Observatory of the Infante Don Luiz at Lisbon.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Angra, (Azores)	.....	.....	29.72	754.9	48.6	9.2	79	NNE	12.5	5.6	.....	.....	7	.....	.....	0.268	6.8	Raining	Dr. J. A. Sampaio.
Campo Major	.....	.....	29.71	754.7	55.3	18.5	52	SW	30.4	13.6	.....	.....	9	SW	.....	0.382	9.7	.....	Dr. A. M. R. dos Santos.
Funchal, (Madeira)	.....	.....	29.70	754.4	62.6	17.0	62	W	13.0	5.8	.....	.....	7	.....	.....	0.417	10.6	.....	Capt. D. A. de Cunha.
Lisbon	.....	.....	29.65	753.2	56.3	13.5	97	S	15.0	6.7	.....	.....	10	.....	.....	0.646	16.4	Light rain	The Observatory.
Ponta Delgada, (Azores)	.....	.....	29.66	753.4	51.1	10.6	82	NNW	8.1	3.6	.....	.....	10	.....	.....	0.181	4.6	.....	

Note.—The originals give the wind-velocity in kilometers per hour; occasionally, the weather by the Vienna symbols; the amount of cloudiness without distinguishing between upper and lower clouds; the barometer corrected but not reduced to sea-level. The rain-fall at Lisbon is measured at noon, instead of 0 h. 6 m., p. m.

RUSSIAN SERIES.

Furnished by the coöperation of Professor H. Wild, Director of the Imperial Central Physical Observatory of Russia, at St. Petersburg.

Warsaw	.....	.....	30.10	764.4	42.1	5.6	91	SSE	7	3	.....	.....	8	.....	.....	.....	.....	.....	Astronomical Obs.
Wilna	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Astronomical Obs.
Dorpat	.....	.....	29.98	761.5	36.3	2.4	98	S	11	5	.....	.....	10	.....	.....	.....	.....	.....	Physical Cabinet.
St. Petersburg	.....	.....	30.01	762.3	34.0	1.1	100	SSE	22	10	.....	.....	10	.....	.....	.....	.....	Light fog	Central Physical Obs.
Kuopio	.....	.....	29.77	756.1	30.7	— 0.7	100	S	22	10	.....	.....	10	.....	.....	.....	.....	Raining	Ch. Forsten.
Kieff	.....	.....	30.35	771.0	34.9	1.6	100	SE	7	3	.....	.....	9	.....	.....	.....	.....	.....	Physical Cabinet.
Nikolaiev	.....	.....	30.44	773.1	39.7	4.3	82	E	13	6	.....	.....	8	.....	.....	.....	.....	.....	Kurdakof.
Kertch	.....	.....	30.43	772.8	37.4	3.0	96	ENE	13	6	.....	.....	10	.....	.....	.....	.....	.....	Lagorio.
Moscow	.....	.....	30.47	773.8	25.5	— 3.6	93	S	9	4	.....	.....	10	.....	.....	.....	.....	.....	Meteorological Obs.
Lugan	.....	.....	30.49	774.4	35.4	1.9	95	Calm	0	0	.....	.....	10	.....	.....	.....	.....	.....	Meteorological Obs.
Archangel	.....	.....	29.84	758.0	35.4	1.9	93	SW	22	10	.....	.....	10	.....	.....	.....	.....	.....	Ogorodnikof.
Tiflis	29.00	736.2	30.54	775.6	43.7	6.5	61	Calm	0	0	.....	.....	0	.....	.....	.....	.....	.....	Physical Observatory.
Astrakhan	.....	.....	30.58	776.7	37.4	2.8	89	ESE	4	2	.....	.....	10	.....	.....	.....	.....	.....	Sebastianof.
Kasan	.....	.....	30.41	772.4	32.9	0.5	100	Calm	0	0	.....	.....	10	.....	.....	.....	.....	.....	Physical Cabinet.
Orenburg	.....	.....	30.80	782.4	—11.0	—23.9	56	E	13	6	.....	.....	0	.....	.....	.....	.....	.....	Tschernischef.
Ekaterinburg	29.55	750.6	30.60	777.3	7.4	—13.6	92	SSE	7	3	.....	.....	10	.....	.....	.....	.....	.....	Meteorogical Obs.
Nukuss	.....	.....	30.57	776.4	29.5	— 1.4	49	NE	4	2	.....	.....	0	.....	.....	.....	.....	.....	
Kasaly	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Bobrof.
Tashkend	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Michelson.
Barnaul	.....	.....	30.87	784.1	—17.1	—27.3	85	NW	4	2	.....	.....	0	.....	.....	.....	.....	.....	Meteorological Obs.
Yeniseisk	.....	.....	30.39	772.0	—19.1	—28.4	73	Calm	0	0	.....	.....	0	.....	.....	.....	.....	.....	Marks.
Irkutsk	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Usolzef.
Peking, (China)	.....	.....	30.48	774.1	22.8	— 5.1	66	Calm	0	0	.....	.....	2	.....	.....	.....	.....	.....	Physical Observatory.
Nertchinsk	27.95	710.0	30.35	770.9	—19.7	—28.7	98	Calm	0	0	.....	.....	3	.....	.....	.....	.....	.....	Meteorological Obs.
Vladivostock	.....	.....	30.33	770.4	17.8	— 7.9	89	NW	4	2	.....	.....	0	.....	.....	.....	.....	.....	
Nikolaievsk, on the Amoor	.....	.....	.....	.....	29.8	— 6.2	.....	W	7	3	.....	.....	7	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols; they omit the rain-fall. The elevation of Tiflis is 409 meters, or 1,341.8 feet; Ekaterinburg, 306.4? m., or 1,005.2? ft.; Tashkend, 494.2? m., or 1,621.3? ft.; Irkutsk, 392 m., or 1,286 ft.; Nertchinsk, 592.0? m., or 1,942.2? ft.; Oorga, 1,281.0? m., or 4,202.6? ft.

SPANISH SERIES.

Furnished by the coöperation of Antonio Aguilar, Director of the Royal Observatory at Madrid, and of Don Cecilio Pujazon, Captain R. N. Director of the Naval Observatory at San Fernando.

Madrid	.....	.....	29.88	759.0	60.4	15.8	64	S	25.4	11.3	.....	4	1	S	.....	0.063	1.6	Cloudy	Royal Observatory.
San Fernando	.....	.....	29.89	759.3	71.4	21.9	55	ESE	12.3	5.5	.....	2	5	SW	ESE	0	0	.....	Naval Observatory.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

Note.—The originals give the weather in general terms, as published; rain-fall for San Fernando from preceding to following midnight; wind-velocity for Madrid in kilometers per hour.

SWEDISH SERIES.

Furnished by the coöperation of Professor R. Rubenson, Director of the Royal Swedish Meteorological Institute, at Stockholm, and of Dr. H. H. Hildebrandsson, Chief of the Meteorological Division of the Upsala Observatory.

Haparanda	.....	.....	29.54	750.3	32.5	0.3	100	SW	.....	.....	4	.....	10	.....	.....	0	0	.....	
Umea	.....	.....	29.53	750.1	33.3	0.7	94	SW	.....	.....	4	.....	10	.....	.....	0	0	.....	
Hernosand	.....	.....	29.43	747.4	33.1	0.6	94	W	.....	.....	2	.....	10	.....	.....	0.118	3.0	Rain & fog	
Stockholm	.....	.....	29.59	751.5	36.1	2.3	98	S	.....	.....	2	.....	10	.....	.....	0.031	0.8	.....	
Wisby	.....	.....	29.79	756.6	39.2	4.0	90	WSW	.....	.....	6	.....	8	.....	.....	0	0	.....	
Sub-Series.																			
Upsala	.....	.....	29.55	750.5	36.3	2.4	94	S	18.3	8.2	.....	.....	10	.....	.....	0.071	1.81	.....	Dr. Hildebrandsson.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

Note.—The originals give the wind-force by the scale 0 to 6, and Upsala also velocity in meters per second; occasionally, the weather by the Vienna symbols, or in general terms; no distinction between the amount of upper and lower clouds. The rain-fall is measured at 8 a. m., local time.

SWISS SERIES.

Furnished by the coöperation of Professor R. Wolf, Director of the Observatory at Zurich, and of Professor E. Plantamour, Director of the Observatory at Geneva.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Geneva	28.60	726.3	30.04	763.0	48.2	9.0	66	N	.....	.....	2	.....	7	.....	.....	0	0	Cloudy.....	The Observatory.
Zurich	28.36	720.4	30.03	762.7	46.0	7.8	77	W	.....	.....	1	.....	5	.....	.....	0	0	Cloudy.....	The Observatory.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—For Geneva the corresponding departures from the normal values are: Barometer, —1.4 mm; Thermometer, +7.7 cent.; Relative Humidity, —14 per cent.

NOTE.—The rain-fall is measured at Zurich at 7 a. m. on the following day. The originals give the barometer corrected but not reduced to sea-level; the wind-force by the scale 0 to 4 for Zurich; the amount of cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The elevation of Geneva is 408 meters, or 1,339 feet, and that of Zurich 470 meters, or 1,542 feet.

TURKISH SERIES.

Furnished by the coöperation of A. Coumbary, Effendi, Director of the Central Observatory at Constantinople, and of Professor C. V. A. Van Dyck, Superintendent of the Lee Observatory at Beirut.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Constantinople	.....	.....	30.28	769.1	55.4	13.0	70	NNE	7	3.0	.....	.....	8	.....	SW	0	0	.....	
Fao, (Persian Gulf)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Salonica	.....	.....	30.32	770.2	67.1	19.5	.....	W	.....	.....	2	.....	0	.....	.....	.....	.....	.....	
Valona	.....	.....	30.32	770.0	60.3	15.7	.....	W	.....	.....	1	.....	0	.....	.....	.....	.....	.....	
Varna	.....	.....	30.16	766.0	50.0	10.0	.....	SE	.....	.....	1	.....	10	.....	.....	.....	.....	Dense fog....	
SUB-SERIES.																			
Beirut, (Syria,) Lee Obs'y	.....	.....	30.11	764.8	67.1	19.5	60	W	.....	.....	1	.....	5c	.....	.....	0	0	*D. clouds.....	Prof. C. V. A. Van Dyck

NOTE.—The originals give the wind-force by the scale 0 to 7, (except Beirut, by the scale 0 to 12, and Constantinople velocity in meters per second;) the weather in general terms as published; no distinction between upper and lower clouds, and, except Constantinople and Beirut, the amount by the scale 0 to 4. It is assumed that the barometer is reduced to sea-level. * Detached clouds.

CANADIAN SERIES.

Furnished by the coöperation of Professor G. T. Kingston, Director of the Magnetic Observatory at Toronto, and Superintendent of the Meteorological Office of the Dominion of Canada, and the respective Observers. Those marked with a star (*) are also telegraphed daily to the office of the Chief Signal Officer, U. S. Army.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Bathurst, N. B	.....	.....	29.51	749.5	24.7	— 4.1	85	NW	7	3.1	.....	.....	0	.....	.....	0.80	20.3	.....	Hon. J. Ferguson.
Brockville, Ontario	.....	.....	29.77	756.1	20	— 6.7	.....	W	5	2.2	.....	.....	10s	.....	W	0.50	12.7	Light snow..	W. R. Bigg.
*Chatham, N. B	.....	.....	29.61	752.1	23	— 5.0	93	W	2	0.9	.....	8ck	2ks	W	W	0.73	18.5	Fair.....	G. A. Blair.
Charlottetown, P. E. Island..	.....	.....	29.68	753.9	29	— 1.7	95	SW	7	3.1	.....	0	0	.....	.....	0.27	6.9	Clear.....	H. J. Cundall, C. E.
Cornwall, Ontario	.....	.....	29.73	755.1	20.0	— 6.7	91	W	.....	.....	1	.....	10n	.....	.....	.....	.....	Snowing.....	James Smith, M. A.
Dalhousie, N. B	.....	.....	29.55	750.6	.....	.....	.....	W	.....	.....	1	.....	.....	.....	.....	1.00	25.4	Threatening	H. A. Johnson.
Esquimault, B. C	.....	.....	30.20	767.1	44.3	6.8	92	SE	.....	.....	.....	.....	10n	.....	.....	0.17	4.3	Cloudy.....	W. H. Bevis.
Fredericton, N. B	.....	.....	29.72	754.9	25.9	— 3.4	86	W	7	3.1	.....	0	5s	.....	W	0.500	12.70	Fair.....	Prof. Harrison.
*Fort Garry, Manitoba	.....	.....	30.32	770.1	—34	—36.7	100	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	James Stewart.
Goderich, Ontario	.....	.....	29.90	759.4	13.2	—10.4	91	NW	.....	.....	2	.....	10n	.....	.....	0.05	1.3	Threatening	H. J. Strang, M. A.
Granton, Ontario	28.67	723.2	29.87	758.7	11.6	—11.3	.....	NW	.....	.....	1	.....	10n	.....	.....	Inap	Inap.	Snowing.....	James Grant.
*Halifax, N. S	.....	.....	29.76	755.9	28	— 2.2	90	SW	4	1.8	.....	0	0	.....	.....	1.300	33.02	Clear.....	F. Allison, M. A.
Hamilton, Ontario	.....	.....	29.87	758.7	16.9	— 8.4	66	SW	.....	.....	1	.....	10n	.....	W	Inap.	Inap.	Light snow..	G. Dickson.
Heart's Content, N. F	.....	.....	29.21	741.9	35	1.7	100	SW	.....	.....	3	.....	10	.....	.....	0.35	8.9	Overcast.....	E. Weedon.
*Kingston, Ontario	.....	.....	29.81	757.2	19	— 7.2	92	W	1	0.4	.....	.....	10s	.....	.....	0.24	6.1	Cloudy.....	S. Woods, M. A.
*Montreal, Quebec	.....	.....	29.71	754.6	20	— 6.7	95	W	12	5.4	.....	.....	10n	.....	.....	1.00	25.4	Light snow..	C. H. McLeod, C. E.
*Ottawa, Ontario	.....	.....	29.72	754.9	16	— 8.9	79	W	6	2.7	.....	.....	10n	.....	SW	0.20	5.1	Light snow..	J. B. Haney.
*Parry Sound, Ontario	.....	.....	29.87	758.7	0	—17.8	70	N	9	4.0	.....	8k	2ks	N	N	0	0	Cloudy.....	Rev. R. Mosley.
Port Dover, Ontario	.....	.....	29.84	757.9	15	— 9.4	90	NW	6	2.7	.....	.....	10n	.....	NW	0.18	4.6	Threatening	H. Morgan.
Port Hastings, N. S	.....	.....	29.68	753.9	30.6	— 0.8	.....	N	16	7.2	.....	.....	.....	.....	.....	0	0	Fine.....	Peter Grant.
Port Stanley, Ontario	.....	.....	29.87	758.7	14	—10.0	92	W	8	3.6	.....	.....	10n	.....	W	0.25	6.3	Cloudy.....	M. Payne.
*Quebec, Quebec	.....	.....	29.64	752.8	23	— 5.0	86	W	6	2.7	.....	.....	10n	.....	W	1.25	31.7	Cloudy.....	Capt. Ashe, R. N.
*Rockliffe, Ontario	.....	.....	29.84	757.9	0	—17.8	100	NW	10	4.5	.....	.....	10s	.....	NW	0	0	Cloudy.....	
St. John, N. B	.....	.....	29.80	756.9	29	— 1.7	77	SW	2	0.9	.....	4ck	0	.....	.....	0.040	1.02	Fine.....	G. Murdoch, C. E.
*Saugeen, Ontario	.....	.....	29.86	758.4	8	—13.3	57	NW	8	3.6	.....	.....	10n	.....	.....	0	0	Cloudy.....	K. Stewart.
Stayner, Ontario	.....	.....	29.82	757.4	10	—12.2	83	NW	10	4.5	.....	.....	10n	.....	NW	0	0	Threatening	R. J. Cole.
Stratford, Ontario	28.48	723.4	29.87	758.7	11.1	—11.6	96	NW	11	4.9	.....	.....	10s	.....	.....	0.05	1.3	Cloudy.....	C. J. MacGregor, M. A.
*Sydney, C. B	.....	.....	29.61	752.1	32	0.0	73	W	18	8.0	.....	0	2ks	.....	W	0.89	22.6	Clear.....	T. C. Hill.
*Toronto, Ontario	.....	.....	29.82	757.4	18	— 7.8	84	W	4	1.8	.....	.....	10n	.....	.....	0.05	1.3	Cloudy.....	Magnetic Observatory.
Woodstock, Ontario	.....	.....	29.88	758.9	13.1	—10.5	92	W	10	4.5	.....	.....	10s	.....	.....	0.11	2.8	Cloudy	J. Montgomery.
SUB-SERIES.																			
St. Johns, Newfoundland	.....	.....	29.26	743.2	31.0	— 0.6	.....	S	.....	.....	.....	5k	10s	.....	.....	0.18	4.6	Threatening	John Delany.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
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NOTE.—The originals for Brockville, Charlottetown, Port Dover, Port Stanley, St. Johns, N. F., Stayner and those telegraphed, give the amount of cloudiness by the scale 0 to 4. The elevation of Granton is 1,015 feet, or 309.4 m.; Stratford, 1,182 feet, or 360.3 m.

UNITED STATES SERIES.

Furnished by the coöperation of Bvt. Brig. Gen. Albert J. Myer, Chief Signal Officer, U. S. Army.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Albany, N. Y.	.....	.....	29.74	755.4	32	0.0	89	Calm	0	0	.....	0	8s	.....	.....	0.08	2.0	Fair	
Alpena, Mich.	.....	.....	29.08	761.5	— 2	—18.9	67	NW	8	3.6	.....	.....	10s	.....	.....	Inap.	Inap.	Cloudy	
Atlantic City, N. J.	.....	.....	29.86	758.4	33	0.6	89	S	8	3.6	.....	10cs	0	W	.....	0	0	Cloudy	
Augusta, Ga.	.....	.....	29.95	760.7	40	4.4	91	S	6	2.7	.....	.....	10s	.....	S	0	0	Cloudy	
Baltimore, Md.	.....	.....	29.82	757.4	30	— 1.1	89	Calm	0	0	.....	2c	Fog	.....	.....	0	0	Foggy	
Barnegat, N. J.	.....	.....	29.84	757.9	31	— 0.6	100	S	8	3.6	.....	8cs	Haze	SW	.....	0	0	Fair	
Bismarck, Dakota	28.22	716.8	30.15	765.8	—23	—30.6	57	Calm	0	0	.....	.....	10s	.....	.....	0.03	0.8	Threatening	
Boston, Mass.	.....	.....	29.80	756.9	30.5	— 0.8	78	S	8	3.6	.....	2ks	Sm'e	.....	.....	0.23	5.8	Fair	
Breckenridge, Minn.	.....	.....	30.42	772.7	—27	—32.8	49	W	8	3.6	.....	0	0	.....	.....	0	0	Clear	
Buffalo, N. Y.	.....	.....	29.78	756.4	18.0	— 7.8	84	NW	4	1.8	.....	.....	10s	.....	NW	0.29	7.4	Cloudy	
Burlington, Vt.	.....	.....	29.72	754.9	35	1.7	70	SE	8	3.6	.....	.....	10s	.....	.....	0.13	3.3	Cloudy	
Cairo, Ill.	.....	.....	30.28	767.8	8	—13.3	78	NW	20	8.9	.....	.....	10s	.....	.....	0.28	7.1	Cloudy	
Cape Hatteras, N. C.	.....	.....	29.94	760.5	41	5.0	83	W	4	1.8	.....	2ck	0	W	.....	0	0	Fair	
Cape Henry, Va.	.....	.....	29.90	759.4	41	5.0	74	SW	8	3.6	.....	5c	0	W	.....	0	0	Fair	
Cape Lookout, N. C.	.....	.....	30.02	762.5	44	6.7	84	SW	12	5.4	.....	0	0	.....	.....	0	0	Clear	
Cape May, N. J.	.....	.....	29.85	758.2	39	3.9	81	SW	16	7.2	.....	2c	5s	SW	SW	0	0	Fair	
Charleston, S. C.	.....	.....	30.02	762.5	41	5.0	83	SW	4	1.8	.....	2cs	Sm'e	.....	.....	0	0	Fair	
Cheyenne, Wyoming	23.87	606.3	29.81	757.2	10	—12.2	79	SW	4	1.8	.....	5ck	0	NW	.....	0.02	0.5	Fair	
Chicago, Ill.	.....	.....	30.08	764.0	0	—17.8	69	NW	8	3.6	.....	0	5s	.....	.....	0.02	0.5	Fair	
Cincinnati, Ohio	.....	.....	29.87	758.7	18	— 7.8	84	NW	12	5.4	.....	.....	10n	.....	N	0.36	9.1	Light snow	
Cleveland, Ohio	.....	.....	29.89	759.2	14.5	— 9.7	91	NW	13	5.8	.....	.....	10n	.....	NW	0.23	5.8	Light snow	
Corsicana, Tex.	.....	.....	30.44	773.2	19	— 7.2	53	N	12	5.4	.....	0	0	.....	.....	0	0	Clear	
Davenport, Iowa	.....	.....	30.32	770.1	—10	—23.3	100	Calm	0	0	.....	0	Sm'e	.....	.....	Inap.	Inap.	Clear	
Denison, Tex.	.....	.....	30.49	774.4	14	—10.0	81	N	10	4.5	.....	1c	0	.....	.....	0.01	0.3	Clear	
Denver, Col.	24.74	628.4	29.96	761.0	5	—15.0	75	Calm	0	0	.....	0	5s	.....	N	0.40	10.2	Fair	
Detroit, Mich.	.....	.....	29.88	758.9	12	—11.1	80	NW	4	1.8	.....	.....	10s	.....	.....	0.13	3.3	Cloudy	
Dodge City, Kan.	27.57	700.3	30.15	765.8	0	—17.8	70	NW	16	7.2	.....	.....	10s	.....	NW	0.05	1.3	Cloudy	
Dubuque, Iowa.	.....	.....	30.28	769.1	—12	—24.4	50	NW	1	0.4	.....	0	0	.....	.....	0	0	Clear	
Duluth, Minn.	.....	.....	30.26	768.6	—18	—27.8	67	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Eastport, Me.	.....	.....	29.75	755.6	20	— 1.7	89	SW	5	2.2	.....	8c	Haze	W	.....	1.17	29.7	Fair	
Erie, Pa.	.....	.....	29.81	757.2	17	— 8.3	83	NW	10	4.5	.....	.....	10n	.....	.....	0.10	2.5	Light snow	
Escanaba, Mich.	.....	.....	30.04	763.0	— 3	—19.4	66	NW	9	4.0	.....	0	1s	.....	.....	0	0	Clear	
Fort Gibson, Indian Ter.	.....	.....	30.44	773.2	6	—14.4	76	N	10	4.5	.....	2c	0	NW	.....	0.02	0.5	Fair	
Ft. St. Michael, Alaska	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Fort Sill, Indian Ter.	29.17	740.9	30.40	772.1	14	—10.0	44	NW	6	2.7	.....	2c	0	.....	.....	0	0	Fair	
Fort Sully, Dakota.	28.42	721.9	30.33	770.4	— 5	—22.2	79	Calm	0	0	.....	0	0	.....	.....	0.02	0.5	Clear	
Florence, Arizona	28.57	725.7	30.14	765.5	42	5.6	.....	NE	.....	.....	.....	0	0	.....	.....	0	0	Clear	
Galveston, Tex.	.....	.....	30.15	765.8	36	2.2	70	N	52	23.2	.....	2k	0	N	.....	0.11	2.8	Fair	
Grand Haven, Mich.	.....	.....	29.95	760.7	14	—10.0	90	N	8	3.6	.....	.....	10n	.....	.....	0.01	0.3	Light snow	
Indianapolis, Ind.	.....	.....	30.06	763.5	6	—14.4	76	NW	6	2.7	.....	.....	10s	.....	.....	0.36	9.1	Cloudy	
Indianola, Tex.	.....	.....	30.24	768.1	35	1.7	61	N	40	17.9	.....	0	0	.....	.....	0	0	Clear	
Jacksonville, Fla.	.....	.....	30.02	762.5	46	7.8	85	SE	3	1.3	.....	8ck	0	SW	.....	0	0	Fair	
Keokuk, Iowa.	.....	.....	30.31	769.9	— 7	—21.7	80	NW	4	1.8	.....	0	0	.....	.....	0.12	3.0	Clear	
Key West, Fla.	.....	.....	30.08	764.0	62	16.7	88	N	8	3.6	.....	8cs	0	.....	.....	0	0	Cloudy	
Kittyhawk, N. C.	.....	.....	29.95	760.7	37	2.8	90	SW	8	3.6	.....	2c	0	W	.....	0	0	Fair	
Knoxville, Tenn.	.....	.....	29.78	756.4	33	0.6	79	E	1	0.4	.....	8cs,ck	0	S	.....	0	0	Cloudy	
La Crosse, Wis.	.....	.....	30.27	768.8	—12	—24.4	75	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Leavenworth, Kan.	.....	.....	30.42	772.7	— 1	—18.3	68	NW	2	0.9	.....	0	0	.....	.....	0.10	2.5	Clear	
Louisville, Ky.	.....	.....	29.98	761.5	13	—10.6	62	NW	18	8.0	.....	.....	10n	.....	.....	0.68	17.3	Heavy snow	
Lynchburg, Va.	.....	.....	29.80	756.9	28	— 2.2	82	NW	2	0.9	.....	.....	10s	.....	.....	0	0	Cloudy	
Malone, N. Y.	.....	.....	29.68	753.9	23	— 5.0	100	W	4	1.8	.....	.....	10n	.....	W	1.28	32.5	Light snow	
Marquette, Mich.	.....	.....	30.01	762.2	0	—17.8	72	W	8	3.6	.....	0	0	.....	.....	0	0	Clear	
Memphis, Tenn.	.....	.....	30.21	767.3	18	— 7.8	83	NW	16	7.2	.....	.....	10s	.....	NW	0.31	7.9	Cloudy	
Milwaukee, Wis.	.....	.....	30.15	765.8	— 7	—21.7	80	NW	12	5.4	.....	0	0	.....	.....	0	0	Clear	
Mobile, Ala.	.....	.....	29.86	758.4	47	8.3	92	S	10	4.5	.....	5k	5s	W	.....	0	0	Threatening	
Montgomery, Ala.	.....	.....	29.85	758.2	45	7.2	88	SE	10	4.5	.....	5cs	2as	SW	S	0	0	Threatening	
Morgantown, W. Va.	28.61	726.7	29.67	753.6	36	2.2	90	S	6	2.7	.....	.....	10s	.....	S	Inap.	Inap.	Threatening	
Mt. Washington, N. H.	23.18	588.8	29.54	750.3	10	—12.2	100	NW	60	26.8	.....	.....	Fog	.....	.....	0.15	3.8	Foggy	
Nashville, Tenn.	.....	.....	29.99	761.7	19	— 7.2	84	NW	8	3.6	.....	.....	10n	.....	.....	0.40	10.2	Light snow	
New Haven, Conn.	.....	.....	29.86	758.4	36	2.2	80	SW	5	2.2	.....	Haz	Fog	.....	.....	Inap.	Inap.	Cloudy	
New London, Conn.	.....	.....	29.84	757.9	32	0.0	79	SW	1	0.4	.....	5cs	Fog	SW	.....	0.03	0.8	Fair	
New Orleans, La.	.....	.....	29.86	758.4	57.5	14.2	84	SW	12	5.4	.....	.....	10s	.....	W	0.15	3.8	Threatening	
Newport, R. I.	.....	.....	29.87	758.7	34	1.1	79	SW	6	2.7	.....	9c	0	W	.....	0.07	1.8	Cloudy	
New York, N. Y.	.....	.....	29.85	758.2	33	0.6	69	SW	1	0.4	.....	8cs	Sm'e	SW	.....	0.02	0.5	Fair	
Norfolk, Va.	.....	.....	29.90	759.4	39	3.9	91	S	6	2.7	.....	0	8s	.....	S	0	0	Fair	
North Platte, Neb.	27.18	690.4	30.09	764.8	— 7	—21.7	81	NW	9	4.0	.....	.....	10ks	.....	NW	Inap.	Inap.	Cloudy	
Omaha, Neb.	29.11	739.4	30.32	770.1	4	—15.6	74	Calm	0	0	.....	10c	0	.....	.....	0.02	0.5	Cloudy	
Oswego, N. Y.	.....	.....	29.75	755.6	28	— 2.2	88	NW	2	0.9	.....	.....	10n	.....	.....	0.09	2.3	Light snow	
Pembina, Dakota	.....	.....	30.27	768.8	—26	—32.2	60	W	3	1.3	.....	.....	10s	.....	.....	0	0	Cloudy	
Philadelphia, Pa.	.....	.....	29.84	757.9	37	2.8	80	Calm	0	0	.....	2c	Fog	W	.....	0	0	Fair	
Pike's Peak, Col.	17.36	440.9	29.57	751.1	— 4	—20.0	75	NW	46	20.6	.....	0	5s	.....	N	0.27	6.9	Fair	
Pittsburgh, Pa.	.....	.....	29.72	754.9	28	— 2.2	88	N	7	3.1	.....	.....	10n	.....	N	0.05	1.3	Light snow	
Port Huron, Mich.	.....	.....	29.90	759.4	10	—12.2	79	NW	6	2.7	.....	.....	10s	.....	.....	0.10	2.5	Cloudy	
Portland, Me.	.....	.....	29.75	755.6	30	— 1.1	78	SW	12	5.4	.....	Haze	Haze	.....	.....	1.02	25.9	Hazy	
Portland, Oregon	.....	.....	30.29	769.4	41	5.0	91	SE	1	0.4	.....	.....	10s	.....	.....	0	0	Cloudy	
Punta Rassa, Fla.	.....	.....	30.09	764.3	54.5	12.5	87	E	5	2.2	.....	5cs	0	.....	.....	0	0	Fair	
Rochester, N. Y.	.....	.....	29.74	755.4	22	— 5.6	86	NW	0	4.0	.....	.....	10n	.....	.....	0.41	10.4	Light snow	
Salt Lake City, Utah.	25.78	654.8	30.11	764.8	31	— 0.6	79	E	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Sandy Hook, N. J.	.....	.....	29.81	757.2	35	1.7	80	SW	1	0.4	.....	2c	Haze	.....	.....	0	0	Fair	
San Diego, Cal.	.....	.....	30.09	764.3	51	10.6	53	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
San Francisco, Cal.	.....	.....	30.15	765.8	53	11.7	60	NW	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Santa Fé, N. M.	23.23	590.0	29.77	756.1	11	—11.7	60	N	3	1.3	.....	0	0	.....	.....	0	0	Clear	
Savannah, Ga.	.....	.....	30.03	762.7	41	5.0	83	SW	6	2.7	.....	2c	Sm'e	SW	.....	0	0	Fair	
Shreveport, La.	.....	.....	30.39	771.9	23	— 5.0	86	NW	8	3.6	.....	0	0	.....	.....	0.07	1.8	Clear	
Smithville, N. C.	.....	.....	30.01	762.2	40	4.4	91	NW	4	1.8	.....	0	2ks	.....	SW	0	0	Clearing	
Springfield, Mass.	.....	.....	29.78	756.4	29	— 1.7	77	S	2	0.9	.....	5c	Haze	W	.....	0.09	2.3	Fair	
St. Louis, Mo.	.....	.....	30.32	770.1	0	—17.8	69	N	8	3.6	.....	0	0	.....	.....	0.42	10.7	Clear	
St. Marks, Fla.	.....	.....	29.97	761.2	48	8.9	92	SE	12	5.4	.....	8cs	0	W	.....	0	0	Fair	
St. Paul, Minn.	.....	.....	30.27	768.8	—19	—28.3	66	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
St. Paul's Island, Alaska	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Thatcher's Island, Mass.	.....	.....	29.82	757.4	34	1.1	69	SW	12	5.4	.....	5c	0	SW	.....	0.20	5.1	Fair	
Toledo, Ohio.	.....	.....	29.88	758.9	18	— 7.8	84	NW	8	3.6	.....	.....	10ks	.....	NW	0.17	4.3	Cloudy	
Tucson, Arizona	27.66	702.6	30.21	767.3	32	0.0	.....	S	.....	.....	.....	2c	0	.....	.....	0	0	Fair	
Tybee Island, Ga.	.....	.....	30.01	762.2	35	1.7	90	W	4	1.8	.....	2c	Fog	W	.....	0	0	Fair	
Vicksburg, Miss.	.....	.....	30.22	767.6	27.5	— 2.6	88	NW	24	10.7	.....	.....	10ks	.....	NW	0.24	6.1	Cloudy	
Virginia City, M. T.	24.15	613.4	29.63	752.6	30	— 1.1	89	SW	.21	9.4	.....	.....	10n	.....	NW	0.04	1.0	Light snow	
Washington, D. C.	.....	.....	29.82	757.4	28	— 2.2	88	E	2	0.9	.....	8cs	2s,sm'	SW	.....	0	0	Cloudy	
Wilmington, N. C.	.....	.....	30.00	762.0	38	3.3	90	SW	6	2.7	.....	.....	10s	.....	SW	0	0	Cloudy	

UNITED STATES SERIES.—CONTINUED.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Upp'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Wood's Holl, Mass.	.....	.....	29.88	758.9	35	1.7	80	W	5	2.2	.....	.....	8s	.....	SW	0.11	2.8	Cloudy	
Yankton, Dakota	28.92	734.6	30.37	771.4	2	—16.7	72	NW	1	0.4	.....	.....	10s	.....	.....	0	0	Cloudy	
Yuma, Arizona	.....	.....	30.11	764.8	61	16.1	.....	N	.....	.....	.....	0	0	.....	.....	0	0	Clear	
Sub-Series.																			
Kingston, Jamaica, W. I.	.....	.....	30.16	766.1	76	24.4	82	Calm	0	0	.....	2c	2s	SE	.....	0	0	.....	James Gall.
Navassa, W. I.	.....	.....	.....	.....	79	26.1	.....	E	.....	.....	3	.....	.....	.....	.....	0	0	Clear	F. M. Everett.
Clifton, Ja., W. I.	27.22	691.4	30.02	762.5	65	18.3	89	SE	1.0	0.4	.....	2c	0	SE	.....	0	0	Fine, clear	C. Partridge.
Paramaribo, D. Guiana, S.A.	.....	.....	30.01	762.2	83	28.3	79	E	.....	.....	3	5k	6ks	E	.....	0.060	1.52	Rain shower	C. J. Hering.
Batavia, Dutch Guiana, S.A.	30.08	764.0	.....	.....	77.9	25.5	.....	E	.....	.....	.....	.....	.....	.....	.....	0	0	½ cloudy	Dr. H. Groot.
Medellin, Colombia, S. A.	25.18	639 6	.....	.....	67.5	19.7	78	Calm	.....	.....	0	3cs	1ks	.....	.....	0	0	Fair	Thomas Herran.
York Factory, B. A.	.....	.....	29.94	760.5	—42.0	—41.1	.....	W	15	6.7	.....	.....	8s	.....	.....	0.07	1.8	Snowing	J. Fortescue, W. Wood.
Honolulu, Oahu, H. I.	.....	.....	30.00	762.0	73	22.8	95	SE	.....	.....	3	.....	.....	.....	.....	0.04	1.0	Hazy	Daniel Smith.
Makawao, Maui, H. I.	.....	.....	29.71	754.6	66	18.9	90	S	.....	.....	3	.....	10n	.....	.....	1.0	25.4	.....	F. L. Clarke.

Marine Series.	True course towards.	Hourly rate in knots.	State of ocean.	Direction of swell from —	Weather.	Observer.
Schooner Addie Fuller, Tarpaulin Cove.	.....	.....	.....	.....	Hazy	Capt. James Jorgensen.

	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Upp'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—
Schooner Addie Fuller, Tarpaulin Cove.	29.82	757.4	38	3 3	90	SW	2	0.9	.....	2c	Haz	W	.....

NOTE.—The originals give the cloudiness by the scale 0 to 4, except York Factory, Medellin and Paramaribo. The elevation of the barometer at Bismarck is 1,677 feet, or 511.1 meters; Cheyenne, 6,057.3 ft., or 1,846.2 m.; Clifton, about 2,892 ft. or 881.5 m.; Denver, 5,135 ft., or 1,565.2 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Florence, 1,550 (?) ft. or 472.5 (?) m.; Makawao, 2,205 ft., or 672.1 m.; Morgantown, 1,027.9 ft., or 313.3 m.; Medellin, 4,876 ft., or 1,486.2 m.; Mt. Washington, 6,285 ft., or 1,915.6 m.; North Platte, 2,846 ft., or 867.4 m.; Omaha, 1,054.6 ft., or 321.4 m.; Pike's Peak, 14,150.7 ft., or 4,313.1 m.; Salt Lake City, 4,362.2 ft., or 1,329.6 m.; Santa Fe, 6,862.2 (?) ft., or 2,091.6 (?) m.; Tucson, 2,513 (?) ft., or 772.1 (?) m.; Virginia City, 5,480 (?) ft., or 1,670.3 (?) m.; Yankton, 1,278 ft., or 389.5 m. The following constants are added in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Denver, 5.22 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fe, 6.64 in.; Tucson, 2.59 in.; Virginia City, 5.48 in. The elevation of Batavia is about 6 feet; the barometric readings need the addition of 0.2 mm. or 0.01 in. for reduction to sea-level.

UNITED STATES NAVAL SERIES.

By authority of the **SECRETARY OF THE NAVY.**

Furnished by the coöperation of the Navy Department, through Commodore Daniel Ammen, U. S. N., Chief of Bureau of Navigation.

STATIONS AND VESSELS.	True course toward—	Hourly rate in knots.	*Barometer as reported.		Temperature of the Air.		Relative Humidity.	Wind.				Clouds.				Rain-fall or melted snow in the past 24 hours.		State of Ocean.	Direction of swell from—	Weather.	Observer.
								Direction.	Velocity		Force.	Amount.		Direction.							
												Up'er	Low'r	Up'er	Low'r						
			Inches.	Millimeters.	Fahrenheit.	Centigrade.	Per cent.	From—	Miles per hour.	Meters per second.	0—10.	0—10.	0—10.	From—	From—	Inches.	Millimeters.				
Naval Academy, Annapolis, Md.			29.41	747.0	32	0.0	86	SSE			1		9		NE	0	0			Cloudy	
Navy Yard, Norfolk, Va.			30.04†	763.0†	37	2.8		S			3		9ks		NW					‡D. clouds	
Navy Yard, Pensacola, Fla.			29.96	761.5	52	11.1		SW			2		10		E					‡D. clouds.	
NavyYard, Portsmouth, N.H.			29.77	756.1	28	— 2.2		WSW			1				N&E					Clear	
Navy Yard, Wash'gton, D. C.			29.93	760.2	25	— 3.9		E			1		5							Fair	
Alarm, New York, N. Y.			28 781	721.0†	33	0.6		SW			1		6		NE	0	0			Hazy	
Colorado, New York, N. Y.			29.92	760.0	33	0.9		SW			1		8		NE	0	0			Clear	
Despatch, Washington, D. C.			29.86†	758.4†	23	— 5.0		E			1		10							Overcast	
Franklin, New York, N. Y.			29.93	760.2	37.5	3.1	95	SW			1		8		SW	Blank	Blank	Smooth		‡D. clouds	
Intrepid, New York, N. Y.			29.88	758.9	32	0.0		SW			1		5		NE					Hazy	
Michigan Erie, Pa.			29.81	757.2	17	— 8.3	83	NW			2		10							Light snow	
Minnesota, New York, N. Y.			29.95	760.7	33	0.6	100	SW			2		8							Misty	
Monongahela, Baltimore, Md.			29.80	756.9	28	— 2.2		W			1		.8		E	Blank	Blank			Hazy	
Santee, Annapolis, Md.			29.46†	748.0†	33	0.6	89	SSE			1		9		NE					Cloudy	
St. Louis, League Island, Pa.			29.71	754.6	28	— 2.2		S			1		8		NNE	0	0			Cloudy	
Swatara, New York, N. Y.			29.93	760.2	32	0.0		NE			1		7s		ENE					Foggy	
Tallapoosa, Washington, D. C.			29.71	754.6	23	— 5.0		Var.			1		7							‡D. clouds	
Wabash, Boston, Mass.			29.85	758.2	32	0.0		SW			2-3		2							Hazy	

* It is not known that the barometer is corrected for temperature, instrumental error or elevation. † Aneroid Barometer. ‡ Detached clouds.

COLLATED AT THE OFFICE OF THE CHIEF SIGNAL OFFICER OF THE ARMY, WASHINGTON, D. C.

The records which appear in this Bulletin are copied from the regular exchanges of this office, made in each instance in compliance with an especial request, and are published for the uses of the coöperating observers. The barometric readings in the first two columns are reduced to freezing and their respective standards; those in the second two also to mean sea-level. The "weather" is generally published as given.

When the distinction between the upper and lower strata of clouds is not reported, the *kinds* or *types*, viz: cirrus, cumulus, stratus, nimbus, scud, fracto, pallio, haze, fog and smoke, as indicated, respectively, by the letters c, k, s, n, d, f, p, hz., fg. and sm'e, are generally published with the amount in the lower-cloud column. The distinction between the upper and lower strata is carefully made in the United States Series and a portion of the Canadian Series, and the types are indicated by the above letters or their combinations in the proper column.

Albert J. Myer

Brig. Gen. (Bvt. Assg^d.) Chief Signal Officer, U. S. A.

BULLETIN

OF

INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON JANUARY 9, 1877.

7:35 A. M. WASHINGTON mean time.

6:7 A. M. MEXICO mean time.
7:7 A. M. SAN JOSE mean time.
0:6 P. M. LISBON mean time.
0:28 P. M. MADRID mean time.
0:43 P. M. GREENWICH mean time.
0:53 P. M. PARIS mean time.
1:1 P. M. BRUSSELS mean time.
1:4 P. M. UTRECHT mean time.
1:13 P. M. BERNE mean time.
1:26 P. M. CHRISTIANIA mean time.
1:33 P. M. COPENHAGEN mean time.
1:33 P. M. ROME mean time.
1:37 P. M. BERLIN mean time.
1:49 P. M. VIENNA mean time.
1:55 P. M. STOCKHOLM mean time.
2:18 P. M. ATHENS mean time.
2:39 P. M. CONSTANTINOPLE mean time.
2:44 P. M. ST. PETERSBURG mean time.

ALGERIAN SERIES.

Furnished by the coöperation of General d'Eudeville, Commandant Supérieur du Génie in Algeria.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Nemours			30.14	765.6	80.2	26.8	16	SW			1		9			0	0	Hidden	Charnot.
Algiers			30.23	767.9	66.6	19.2		WSW			2		3			0	0	Fair	Peter.
La Calle			30.19	766.9	65.1	18.4	78	E			1		4			0	0	Fair	Fleury.
Tunis			30.30	769.5	62.6	17.0		W			2		1			0	0	Clear	Jacques.
Stax																			
Saida			30.26	768.5	63.1	17.3	16	S			6		2			0	0	Clear	Millot.
Tebessa			30.30	769.6	68.0	20.0		NNW			1		2			0	0	Clear	Bourgeois.
Geriville			30.27	768.9	60.4	15.8	23	N			3		3			0	0	Fair	Lemaillot.
Laghouat			30.32	770.0	62.6	17.0	20	W			1		2			0	0	Clear	Guyot.
Biskra			30.36	771.2	66.0	18.9	36	NE			1		0			0	0	Clear	Kuntz.

NOTE.—In the originals the distinction between the amount of upper and lower clouds is apparently not made. The weather is published as given. The rain-fall is measured at 7 a. m., local time.

AUSTRIAN SERIES.

Furnished by the cooperation of Professor Ferdinand Osnaghi, Director of the Imperial and Royal Central Meteorological Institute at Vienna.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Agram			30.21	767.4	56.3	13.5	68	SW			4		8			0	0		Prof. Ivan Stozir.
Cracow, I. R. Observatory			30.06	763.4	46.0	7.8	78	NE			1		10			0.004	0.1		Dr. Wierzbiski.
Eperies			30.25	768.3	43.7	6.5	96	S			5		10			0	0		Julius Mikolik.
Gratz	28.93	734.7	30.21	767.4	43.2	6.2	76	S			2		10			0	0		Andreas Rospini.
Hermannstadt	28.88	733.5	30.35	770.8	43.9	6.6	71	SE			1		6			0	0		Prof. Reissenberger.
Kremsmünster	28.76	730.6	30.17	766.2	33.1	0.6	96	Calm			0		10			0	0		Prof. C. Wagner.
Lemberg			30.13	765.3	46.2	7.9	76	SW			3		7			0	0		Dr. T. Stanecki.
Nyiregyhaza																			Habzsuda Daniel.
Pola			30.36	771.1	51.1	10.6	93	SW			0		108			0	0	Foggy	I.R.Hydrographic Office.
Szegedin			30.26	768.5	49.5	9.7	71	S			3		3			0	0		Karl Stancel.
Trieste			30.39	771.9	47.5	8.6	99	Calm			0		10			0	0	Foggy	Prof. V. Farolfi.
Vienna			30.15	765.8	42.8	6.0	96	WSW			1		10			0	0	Foggy	I. R. Central Met. Obs'y.

NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 7 p. m., local time. The elevation of Gratz is 343.5 meters, or 1,126.9 feet: Hermannstadt, 407.8 meters, or 1,337.9 feet; Kremsmünster, 383.6 meters, or 1,258.5 feet.

BELGIAN SERIES.

Furnished by the coöperation of J. C. Houzeau, Director of the Royal Observatory at Brussels.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Arlon			30.04	763.1	52.0	11.1		WNW			3		7			0	0		
Brussels			29.94	760.4	52.7	11.5	74	WSW			2		7k	WSW	W	0.006	0.15		Royal Observatory.
Furnos			29.44	747.8	53.1	11.7	84	WSW			2		5			0.283	7.2		
Masseyck			29.89	759.2	53.1	11.7	80	WNW			5		8			0.030	0.5		

NOTE.—In the originals, the weather is occasionally given in general notes.

BRITISH SERIES

Furnished by the coöperation of Robert H. Scott, Esq., Director of the Meteorological Office, London, Alexander Buchan, Secretary of the Scottish Meteorological Society, Edinburgh, and the respective Observers.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Aberdeen			29.78	756.4	38.1	3.4		NW	15	6.7			6			0.010	0.25	*D. clouds	William Boswell.
Ardrossan			29.75	755.6	42	5.6		E			2		8					Overcast	William McNeil.
Armagh, Observatory			29.72	754.9	44.2	6.8		S	6	2.7			7					*D. clouds	S. Call, for Dr. Robinson
Birr Castle, (Parsonstown)			29.72	754.9	43.8	6.6		S			1		9					Misty	J. Dreyer.
Bradford			29.75	755.6	43.4	6.3		SE			0		4			0	0	*D. clouds	J. McLandsborough.
Bridgetown, (Barbados)			30.15	765.8	81.2	27.3		NE			3		6					*D. clouds	Sergt. J. F. Halanen, A.
Cambridge, Observatory			29.79	756.7	49.0	9.4		SW			1		10					Drizzling	H. Todd. [H.C
Cardington			29.79	756.7	50.0	10.0		SW			1		6					*D. clouds	John McLaren.
Carlisle																			T. Bell, for J. Cartmell.
Chatham, School M. E			29.84	757.9	50.7	10.4		SW			2		5					Overcast	Maj. C. N. Martin, R.E
Dartmoor	28.41	721.6	29.93	760.2	45.6	7.6		W			5		6					Showery	R. E. Power.
Davos Platz, (Switzerland)	25.04	636.0			39.8	4.3	75	Calm			0		8			0	0	*D. clouds	Francis Redford, M. A.
Donaghadee			29.73	755.1	45	7.2		SSW			4		8					*D. clouds	J. Mac Gowan.
Dover			29.86	758.4	51	10.6		W			3		5					½ clouded	J. Costello.
Eccles, (near Manchester)			29.74	755.4	42.2	5.7		S	0	0			8					Misty	Thomas Mackereth.
Falmouth, Observatory			29.88	758.9	51.7	10.9		WSW			3		8					Overcast	The Staff.
Fort Napier, (Natal)	27.56	700.0	29.79	756.7	92.9	33.8		E			1		0					Blue sky	Pvt. G. Salmon, A. H. C
Free Town, (Sierra Leone)			29.95	760.7	86.0	30.0		N			0		2					*D. clouds	
Galway, Queen's College			29.64	752 8	47	8.3		SE			2		4					*D. clouds	Prof. A. H. Curtis.
Gibraltar, (Mediterranean)			29.95	760.7	65.0	18.3		NE			4		3					*D. clouds	Corpl. C. Aitken, A.H.C.
Glasgow, Observatory			29.77	756.1	40.3	4.6		NE			1		10					Overcast	Lewis Stuart.
Great Yarmouth			29.80	756.9	47	8.3		W			3		6					Misty	G. T. Watson.
Greenwich, Royal Obs'y			29.83	757.7	51.8	11.0		SW			4		4			9mm	dank	*D. clouds	The Staff, for G. B. Airy.
Guernsey			29.92	760.0	52	11.1		SW			2		8					*D. clouds	Dr. S. E. Hoskins.
Helston			29.80	756.9	52	11.1		SW			6		6c,k			0.8	20.3	Fair	M. P. Moyle.
Holyhead			29.75	755.6	48	8.9		S			2		3					*D. clouds	John Tilston.
Kew, Observatory			29.84	757.9	52.2	11.2		SW	16	7.2			7					Threatening	The Staff.
Kingstown			29.73	755.1	44	6.7		Calm			0		6					*D. clouds	George Mitchell.
Leicester Museum			29.78	756.4	46.0	7.8		S			1		10					Raining	Wm. J. Harrison, F.G.S.
Malta, (Mediterranean)			30.22	767.6	65.0	18.3		SE			2		4k					*D. clouds	Corp'l. P. Bravis, A.H.C.
Nairn			29.87	758.7	38	3.3		NE			4		8					¾ clouded	W. D. Penny.
Nassau, (Bahamas)			30.09?	764.3?	74.0	23.3		E			1		3					Gloomy	Surg. Maj. Henry.
Nottingham, Observatory			29.78	756.4	44.8	7.1		Calm			0		10s			0.04	1.12	Foggy	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			29.76	755.9	45.5	7.5		SSW			1–2		10			Blank	Blank	Foggy	Rev. Stephen Whitty.
Oxford, Radcliffe Obs'y			29.80	756.9	52	11.1		WSW			2		10					Gloomy	J. Lucas.
Plymouth			29.86	758.4	51.2	10.7		WSW			3		7					*D. clouds	John Merrifield.
Roche's Point			29.71	754 6	49	9.4		W			2		5					⅛ clouded	W. Kennedy.
Saint Ann's Head			29.76	755.9	50	10.0		W			4		2					Blue sky	John C. Walker.
Saint Helier, (Jersey)			29.95	760.7	52.4	11.3		SW			5		2					¼ clouded	A. P. Amy.
Sandwick Manse, (Orkneys)			29.83	757.7	35.8	2.1		N	18	8.0			0					Blue sky	Rev. C. Clouston, LL. D.
Scarborough																			F. Shaw.
Scutari Cemetery, (Turkey)			30.36	771.1	46.4	8.0		NE			1		10					Drizzling	Sergt. W. H. Lyne.
Sheffield			29.74	755.4	46.6	8.1		SSE			1		7			0.017	0.43	Overcast	W. F. Cooper.
Silloth Rectory			29.85	758.2	42.6	5.9	82	SE			2		6			0.385	9.78	*D. clouds	Rev. Francis Redford
Stonyhurst, Observatory			29.75	755.6	45.6	7.6		W			0		10s					Overcast	Rev. S. J. Perry.
Stornoway, Lewis C., (Hebr.)			29.84	757.9	35	1.7		NE			4		5					*D. clouds	John Smith.
Stratfield Turgiss			29.80	756.9	51.3	10.7		SW			2		5					*D. clouds	Rev. Charles H. Griffith
Thurso			29.79	756.7	39	3.9		NNE			6		7					*D. clouds	John Trotter.
Truro, Royal Institution			29.91	759.7	53	11.7		W			5		5					*D. clouds	W. Newcombe.
Valencia, Observatory			29.73	755.1	48.9	9.4		WSW	14	6.3			5					*D. clouds	The Staff.
SUB-SERIES.																			
Calf of Man, (Isle of Man)					50	10.0		S			2		5			0	0		Henry Mercer.
Cape Good Hope, Obs'y			30.02	762.5	84.5	29.2	39	WSW	11	4.9		3	2						The Staff, for E. J. Stone.
Hobart Town, (Tasmania)			29.80	756.9	65.0	18.3	94	S			1		0			0	0		Francis Abbott, F.R.A.S.
Leith, Restalrig Park			29.81	757.2	39.9	4.4		NE			2		10s			0.60	15.2	Cloudy	Andrew Gibb.
Mauritius, Observatory			29.98	761.5	84.7	29.3	56	ENE	12.1	5.4		1	2		ENE	0.01	0.3	*D. clouds	C. Meldrum.
Melbourne, Observatory								SE	6	2.7			0			0	0	Fine	R. L. J. Ellery.
Monach L't-house, (Hebrides)			29.87	758.7	38	3.3		E			6	5	5						J. Youngclause.
North Unst, (Shetland Is.)			29.77	756.1	35	1.7		NNE			8	4	5	N		Blank	Blank		Robert Burnet.

Note.—Generally, the originals do not give the relative humidity, rain-fall, or distinction between upper and lower clouds. The originals give the wind direction to 32 points and weather by the Beaufort notation. The originals give the barometer for Aberdeen, Cardington, Galway, Oxford, St. Helier, Sandwick, Scarborough, Stonyhurst, Leith, Monach and North Unst as read off and the cloudiness for Stornoway by the scale 0 to 4. The wind-force is given by the scale 0 to 12 in the official series; 0 to 6 in the sub-series; except in lbs. per square foot for Greenwich and Hobart Town. The rain-fall is measured at Aberdeen at 10 a. m.; Bradford, 9 a. m.; Hobart Town, 7:30 a. m.; Nottingham, 6 p. m.; Mauritius, 9 a. m., local time. The elevation of Dartmoor is 1,400 feet, or 426.7 meters; Davos Platz, 5,105? feet, or 1,556.0? meters; Fort Napier, 2,200 feet, or 670.6 meters. *Detached clouds.

By authority of the Minister of Foreign Affairs.

COSTA RICA SERIES.

Furnished by the coöperation of Senor Federico Maison, Director of the Central Office of Statistics and Meteorology.

San José																			

DANISH SERIES.

Furnished by the coöperation of Captain N. Hoffmeyer, Director of the Royal Danish Meteorological Institute at Copenhagen.

Copenhagen			29.45	747.9	37.2	2.9	98	NNW			2		10					Raining	
Fanöe			29.54	750.2	40.3	4.6	100	W			2		10					Foggy	
Godthaab, (Greenland)			29.01	736.8	26.2	— 3.2		SSW			8		10					Snowing	
Stykkisholm, (Iceland)			30.02	762.6	24.3	— 4.3	98	S			4		10					Snowing	
Thorshavn, (Faröe)			30.07	763.6	28.4	— 2.0	82	NNE			4		3						
Vestervig			29.50	749.3	38.1	3.4	100	SW			2		10					Foggy	

Note.—The originals give the wind-force by the scale 0 to 6; occasionally, weather by Vienna symbols; no distinction between the amount of upper and lower clouds.

FRENCH SERIES.

Furnished by the coöperation of His Excellency, U. J. Le Verrier, Director of the Paris Observatory, and the respective Observers.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Alengon	.....	.....	30.05	763.2	51.8	11	86	SW	.....	.....	2	.....	5kn	.....	SW	0	0	Cloudy	Normal School.
Amiens	.....	.....	29.97	761.2	55.8	13.2	93	SW	.....	.....	2	.....	10	.....	.....	0	0	Covered	Normal School.
Avignon	.....	.....	30.29	769.3	62.1	16.7	67	SE	.....	.....	1	.....	2	.....	SW	0	0	Light clouds	Normal School.
Bar-sur-Seine	.....	.....	30.11	764.7	57.0	13.9	81	WSW	.....	.....	2	.....	10	.....	WSW	.....	.....	Raining	C. Saillard.
Beaumette, (near Angers)	.....	.....	30.00	762.1	57.4	14.1	75	S	2.0	0.9	.....	.....	.....	.....	SW	0	0	.....	Beaumette Observ'tory.
Beauvais	.....	.....	30.00	761 9	54.3	12.4	71	SW	.....	.....	3	.....	2	.....	WSW	0.167	4.25	Slightly cl'dy	Normal School.
Besançon	.....	.....	30.15	765.8	61.9	16.6	58	S	.....	.....	3	.....	2	.....	SW	0	0	Slightly cl'dy	Normal School.
Bourg en Bresse	.....	.....	30.13	765.2	60.6	15.9	73	S	.....	.....	8	.....	10n	.....	N	0	0	Covered	Normal School.
Bourges	.....	.....	30.00	762.1	60.1	15.6	75	SW	.....	.....	2	.....	5	.....	SE	0	0	Cloudy	Normal School.
Brest	.....	.....	29.90	759.4	54.5	12.5	86	SW	.....	.....	3	.....	8k	.....	SW	0.439	11.00	.....	Naval Observatory.
Carcassonne	.....	.....	30.19	766.9	57.2	14	80	E	.....	.....	4	.....	10	.....	W	0	0	Covered	Normal School.
Caen	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Chartres	.....	.....	30.01	762.2	56.1	13.4	84	W	.....	.....	2	.....	7	.....	E	0.043	1.1	.....	Normal School.
Châlons-sur-Marne	.....	.....	29.85	758.3	57.9	14.4	63	W	.....	.....	3	.....	5ck	.....	E	0	0	Cloudy	Normal School.
Clermont	.....	.....	30.06	763.5	63.3	17.4	52	S	.....	.....	3	.....	2	.....	S	0	0	Slightly cl'dy	Puy de Dome Obs'y.
Commercy	.....	.....	30.04	763.0	57.9	14.4	68	W	.....	.....	6	.....	5n,ks	.....	SW	0	0	Cloudy	Normal School.
Commune de Gréasque*	.....	.....	30.34	770.6	57.4	14.1	74	E	.....	.....	4	.....	8	.....	E	0	0	.....	M. Kina.
Grenoble	.....	.....	30.16	766.1	63.7	17.6	89	WNW	.....	.....	8	.....	8ck	.....	NE	0	0	Very cloudy	Normal School.
La Roche-sur-Yon	.....	.....	30.05	763.2	58.3	14.6	78	S	.....	.....	8	.....	5	.....	N	0	0	Cloudy	Normal School.
Le Mans	.....	.....	30.15	765.9	54.0	12.2	93	SW	.....	.....	3	.....	2	.....	SW	0	0	Slightly cl'dy	Normal School.
Lons-Le-Saulnier	.....	.....	30.24	768.1	60.6	15.9	61	S	.....	.....	6	.....	2	.....	W	0	0	Slightly cl'dy	Normal School.
Lorient	.....	.....	30.02	762.6	55.8	13.2	77	SSW	.....	.....	2	.....	5	.....	SW	0.197	5.0	Cloudy	Naval Observatory.
Macon	.....	.....	30.25	768.4	59.4	15.2	76	SSE	.....	.....	2	.....	10	.....	.....	0	0	Covered	Normal School.
Metz	.....	.....	30.13	765.2	57.2	14.0	66	SW	.....	.....	2	.....	5	.....	SW	0	0	.....	M. Schuster.
Mirecourt	.....	.....	29.71	754.5	59.5	15.3	81	SSW	.....	.....	4	.....	10	.....	NW	0	0	Covered	Normal School.
Nismes	.....	.....	30.27	768.8	62.9	11.6	76	S	.....	.....	1	.....	5	.....	N	0	0	Cloudy	Normal School.
Orleans	.....	.....	30.01	762.2	56.8	13.8	76	S	.....	.....	1	.....	2	.....	S	0	0	Slightly cl'dy	Normal School.
Paris, Observatory	.....	.....	30.04	762.9	55.9	13.3	73	SW	.....	.....	2	.....	8ck	.....	SW	0.013	0.33	Very cloudy	National Observatory.
Parthenay	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Privas	.....	.....	30.30	769.7	56.8	13.8	.....	SSE	.....	.....	2	.....	10	.....	SSE	0	0	Covered	Normal School.
Rochefort, Observatory	.....	.....	30.06	763.4	61.2	16.2	75	S	.....	.....	3	.....	2	.....	N	0	0	¾ covered	Naval Observatory.
Rouen	.....	.....	30.00	762.1	58.6	14.8	64	WSW	.....	.....	2	.....	2	.....	W	0.142	3.6	Slightly cl'dy	Normal School.
Saint Lo	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Tarbes	28.86	733.0	29.91	759.6	68.9	20.5	80	ESE	.....	.....	2	.....	0	.....	.....	0	0	Clear	Normal School.
Villefranche	.....	.....	30.17	766.2	64.4	18	80	SE	.....	.....	6	.....	8	.....	SE	0	0	Very cloudy	Normal School.
SUB-SERIES.																			
Fort de France, Martinique	.....	.....	30.00	762.0	78.8	26	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	L'Abbé Marchési.
Marseilles	.....	.....	30.27	768.8	62.1	16.7	64	SSE	.....	.....	2	.....	8	.....	.....	0	0	Covered	Marseilles Observatory.
Mont-Louis	25.04	636.0	30.35	771.0	52.3	11.3	24	SW	9.3	4.17	.....	.....	8	.....	SW	0	0	.....	—. Falguère.
Montsouris, Paris	.....	.....	30.02	762.6	55.8	13.2	78	SW	.....	.....	2	.....	7	.....	SW	0.008	0.2	.....	Montsouris Observatory
Perpignan	.....	.....	30.08	763.9	56.7	13.7	82	NE	9.3	4.17	.....	.....	10	.....	NE	0	0	.....	Dr. Fines.
Pic du Midi, (Summit,) H. P.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. Baylac.
Pic du Midi, (Plantade,) H. P.	22.64	575.0	.....	.....	39.6	4.2	.....	SW	.....	.....	5	.....	10	.....	.....	0	0	Cloudy	General de Nansouty.
Saint Maur, (near Paris)	.....	.....	30.03	762.8	56.3	13.5	73	SSW	.....	.....	1	.....	6	.....	.....	0.004	0.1	Very cloudy	E. Renou.
Toulouse	.....	.....	30.16	766.0	57.9	14.4	80	SSE	.....	.....	3	.....	0	.....	.....	0	0	.....	Toulouse Observatory.
Tours	.....	.....	30.04	763.1	58.3	14.6	74	SW	.....	.....	2	.....	5	.....	W	0	0	.....	C. Marquet.
Versailles, (near Paris)	.....	.....	30.04	762.9	55.8	13.2	79	WSW	.....	.....	2	.....	7	.....	.....	0.007	0.17	Fair	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shangh ai)	.....	.....	30.41	772.3	35.4	1.9	83	ENE	5.6	2.50	.....	.....	0	.....	.....	0	0	.....	Marc Dechevrens, S. J.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—Generally, the originals give the wind-force by the scale 0 to 7; no distinction between upper and lower clouds, and, in the official series, the amount by the scale 0 to 4 the rain-fall *as measured at* 7, 8 or 9 a. m., local time; at Clermont, 9 a. m. of the following day: the weather in general terms as published. The elevation of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; Clermont, 388 meters, or 1,272.9 feet; Commune de Gréasque, 322 meters, or 1,056.4 feet; Pic du Midi, (Summit,) 2,877 meters, or 9,439.1 feet; Pic du Midi, (Plantade,) 2,366 meters, or 7,762.6 feet; Tarbes, 308 meters, or 1,010 feet. *In correcting the Mont-Louis barometric observations for altitude, the constant 135. millimeters has been added.* *Bouches-du-Rhône

GERMAN SERIES.

Furnished by the coöperation of Professor Dr. G. Neumayer, Director of the German Naval Observatory, Hamburg.

Bamberg	.....	.....	29.96	760.9	50.0	10.0	68	S	.....	.....	1	.....	8	SW	.....	0	0	.....	Prof. T. Hoh.
Berlin	.....	.....	29.73	755.1	55.9	13.3	59	S	.....	.....	2	.....	6	.....	.....	0.047	1.2	.....	Prof. Arndt.
Breslau	.....	.....	29.98	761.5	51.8	11.0	70	S	.....	.....	2	.....	9	.....	.....	0	0	.....	Royal University Obs'y.
Carlsruhe	.....	.....	30.01	762.2	61.2	16.2	59	SW	.....	.....	5	.....	10	.....	.....	0	0	.....	A. Sens.
Cassel	.....	.....	29.83	757.7	60.8	16.0	54	E	.....	.....	2	.....	7	WSW	.....	0.028	0.7	.....	Dr. H. Möhl.
Crefeld	.....	.....	29.87	758.6	52.3	11.3	76	W	.....	.....	6	.....	9	.....	.....	0.20	5.	.....	Director Lose.
Emden	.....	.....	29.81	757.2	47.8	8.8	97	W	.....	.....	2	.....	10	.....	.....	1.189	30.2	.....	Prof. Prestel.
Frankfort on the Main	.....	.....	29.98	761.5	60.4	15.8	63	SW	.....	.....	3	.....	7	.....	.....	0	0	.....	Physical Society.
Friedrichshafen	28.71	729.1	30.16	766.1	48.9	9.4	75	WSW	.....	.....	1	.....	4	.....	.....	0	0	.....	M. Wilhelm.
Hamburg	.....	.....	29.49	749.1	55.0	12.8	85	SW	.....	.....	8	.....	10n	SW	.....	0.370	9.4	Rain-squall	Captain F. Hegemann.
Kiel	.....	.....	29.48	748.7	47.3	8.5	90	NW	.....	.....	4	.....	10	.....	.....	1.398	35.5	.....	Prof. G. Karsten.
Königsberg, (Prussia)	.....	.....	29.74	755.3	48.3	9.3	85	SW	.....	.....	5	.....	9	.....	.....	0.087	2.2	.....	Prof. E. Luther.
Koslin	.....	.....	29.69	754.1	48.9	9.4	.....	SSW	.....	.....	1	.....	10	.....	.....	Inap.	Inap.	Light rain	H. Müller.
Leipsic	.....	.....	29.82	757.4	56.1	13.4	58	SSW	.....	.....	4	.....	7	SW	.....	0	0	Stormy	Prof. Bruhns.
Memel	.....	.....	29.71	754.7	38.1	3.4	95	S	.....	.....	5	.....	10ks	.....	.....	0.047	1.2	Raining	Reinbrecht & Skalweit.
Münster	.....	.....	29.81	757.1	52.7	11.5	85	SW	.....	.....	3	.....	10	.....	.....	0.193	4.9	.....	Prof. E. Heis.
Neufahrwasser	.....	.....	29.73	755.1	46.2	7.9	83	SW	.....	.....	4	.....	10	WSW	.....	.....	.....	Raining	A Lothe.
Posen	.....	.....	29.85	758.3	53.2	11.8	60	S	.....	.....	3	.....	9	.....	.....	Inap.	Inap.	.....	Dr. Magener.
Strassburg, (in Alsace)	.....	.....	30.08	764.9	63.0	17.2	49	SW	.....	.....	5	.....	10	SW	.....	0	0	.....	Dr. Schur.
Stuttgart	.....	.....	29.98	761.6	64.0	17.8	38	W	.....	.....	5	.....	6	.....	.....	0	0	.....	Prof. Schoder.
Thorn	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Dr. Hasenbalg.
Treves, (Trier)	.....	.....	29.94	760.5	57.9	14.4	60	WSW	.....	.....	8	.....	10	.....	.....	0.008	0.2	.....	Prof. Flesch.
Weissenburg, (Bavaria)	28.52	724.3	30.00	761.9	60.6	15.9	42	S	.....	.....	5	.....	8	SW	.....	Inap.	Inap.	.....	Dr. von Bebber.
Wustrow, Naval School	.....	.....	29.67	751.1	51.4	10.8	92	SSW	.....	.....	6	.....	10	.....	.....	0.205	5.2	.....	E. F. Schütz.
GERMAN NAVAL SERIES.																			

NOTE.—The elevation of Friedrichshafen is 413.4 meters, or 1,356 3 feet; Weissenburg, 431 meters, or 1,414.0 ft. In the originals the distinction between the amount of upper and lower clouds is not made. It is not always certain that the remarks in the weather column refer to the moment of observation

GREEK SERIES.

Furnished by the coöperation of Professor Dr. J. F. Julius Schmidt, Director of the Royal Observatory at Athens.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er. 0—10.	Clouds. Amount. Low'r. 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Athens			30.29	769.3	58 3	14.6		NE										½clear	

Note.—The originals give the barometer corrected, but not reduced to sea-level; occasionally the kind of clouds; the weather as published. They omit the humidity, wind-force, amount of cloudiness and rain-fall.

ITALIAN SERIES.

Furnished by the coöperation of His Excellency the Minister of Agriculture, Industry and Commerce, and the respective Observers.

Udine			30.35	770.8	47.3	8.5	92	Calm	0	0			10			0.016	0.4	Light rain	Prof. Giovanni Godio.
Stelvio	22.34	567.3	30.44	773.1	35.1	1.7		W			6		10			0	0		Signora Ernesta Manfredi.
Valdobbia	22.37	568.2	30.42	772.6	36.1	2.3	91	W			4		8	W		0	0		Ab. Dom. Mongini.
Padua			30.35	771.0	47.1	8.4	99	SW	1.8	0.8			10			0.004	0.1	Foggy	Prof. Dott. Lorenzoni.
Vicenza			30.35	770.9	46.0	7.8	99	N	0	0			10			0.016	0.4	Foggy	Conte Alm. Da Schio.
Verona			30.35	770.9	48.9	9.4	95	W			1		10			0	0		Dott. B. Bertoncelli.
Bergamo	28.99	736.4	30.35	771.0	47.5	8.6	86	SW			1		9			0.016	0.4	Foggy	Prof Trionfini Carlo.
Domodossola			30.38	771.6	48.7	9.3	85	Calm			0		9			0.172	4.4	Raining	Prof. Giuseppe Colza.
Milan			30.38	771.7	48.9	9.4	94	WNW			1		10	W		0	0		Ab. Gio. Capelli.
Pavia			30.38	771.7	47.7	8.7	93	SW			1		10			0.039	1.0	Light rain	Prof. Gio. Cantoni.
Moncalieri			30.41	772.3	46.2	7.9	99	ENE	0.7	0.3			10			0	0		Prof. P. F. Denza.
Mondovi	28.43	722.0	30.40	772.2	47.5	8.6	75	NE			2		10			0	0		Prof. D. O. Bruno.
Porto Maurizio			30.39	771.8	56.3	13.5	83	NE			2		10	ENE		0	0		Prof. L. Vassallo.
Genoa			30.38	771.6	54.5	12.5	82	NE	0	0			10	SE		0.343	8.7	Raining	Prof. G. M. Garibaldi.
Piacenza			30.39	771.8	48.7	9.3	91	WNW	6.6	3.1			10			0	0		Dott. G. Manzi.
Parma			30.39	771.9	52.0	11.1	86	W			2		10			0	0		Prof. P. Pigorini.
Florence			30.40	772.2	51.4	10.8	94	NW			2		7			0	0		Cav. F. Meucci.
Leghorn			30.36	771.2	58.1	14.5	70	E	4.3	1.9			6	SW		0	0		Prof. P. Monte.
Siena	29.14	740.1	30.37	771.4	52.0	11.1	86	ESE	0	0			6	S		0	0		Prof. L. Toscani.
Urbino	28.80	731.5	30.39	772.0	53.1	11.7	72	SW			2		10			0	0		Prof. P. Serpieri.
Pesaro			30.39	771.9	44.1	6.7	99	NW	6.3	2.8			10			0	0	Foggy	Prof. Luigi Guidi.
Ancona			30.39	772.0	47.5	8.6	93	NW			2		10			0	0	Foggy	Prof. F. De— Bosis.
Grosseto			30.41	772.3	58.3	14.6	79	SSW			4		4	S		0	0		Avv. P. Ponticelli.
Rome			30.39	771.9	57.0	13.9	77	NNW	1.2	0.6			2	NW		0	0		Prof's. P. Secchi & L. Respighi.
Naples, O. U.			30.39	771.8	60.1	15.6	77	WNW			1		9	NW		0	0		Prof. L. Palmieri.
Lecce			30.40	772.2	54.0	12.2	84		13.7	6.1			5			0	0		Prof. C. De—Giorgi.
Cosenza			30.42	772.6	58.1	14.5	57	SW	1.3	0.6			2			0	0		Prof. F. D. Conti.
Cagliari																			Prof. A. Pacinotti.
Ilposto, (Sicily)			30.30	769.7	59.0	15.0	74	SE			2		0			0	0		Prof. F. Caflero.
Palermo			30.33	770.3	61.5	16.4	61	E	1.3	0.6			3			0	0		Prof. G. Cacciatore.
Caltanissetta	28.37	720.7	30.36	771.1	55.4	13.0	62	W			1		0			0	0		Prof. A. Pagani.
Siracusa			30.36	771.1	59.5	15.3	75	E			1		7	W		0	0		Prof. V. Giuliano.
Sub-Series.																			
Naples, S. R.			30.42	772.7	58.1	14.5	73	NE	0	0			5	E		0	0		Prof. F. Brioschi

Note.—The originals give the wind-force by the scale 0 to 4, or the velocity in kilometers per hour; generally, no distinction between upper and lower clouds; occasionally the weather by the Vienna symbols. The elevation of Stelvio is 2,543.0 meters, or 8,342.9 feet; Valdobbia, 2,548.0 meters or 8,359.3 feet; Bergamo, 379.6 meters, or 1,245.3 feet; Mondovi, 556 meters, or 1,824.2 feet; Urbino, 451 meters, or 1,479.7 feet; Siena, 348.5 meters, or 1,143.3 feet; Caltanissetta, 570.3 meters, or 1,871.0 feet.

Furnished by the coöperation of the Imperial University of Tokei, Japan.

JAPANESE SERIES.

Tokei			30.30	769.6	38	3.3		NW	4	1.8			0			0	0		Prof. P. V. Veeder.

Note.—The originals give the amount of cloudiness by the scale 0–4 without distinguishing between upper and lower clouds. The rain-fall is measured at 7 a. m. local time.

By authority of the Secretary of Public Works.

MEXICAN SERIES.

Furnished by the coöperation of Senor Mariano Barcena, Director of the Central Meteorological Observatory in the City of Mexico.

Mexico																		Mariano Barcena. Vicente Reyes. Miguel Perez. (Engineers in charge.)	

Note.—The elevation of Mexico is 2,260 meters, or 7,512.9 feet. The rain-fall is measured at 6 a. m., local time.

NETHERLANDS' SERIES.

Furnished by the cooperation of Professor Buys Ballot, Director of the Royal Meteorological Institute of the Netherlands at Utrecht.

Flushing			29.91	759.8	49.6	9.8		WSW			5					0.429	10.9		
Groningen			29.66	753.3	48.7	9.3		W			4					1.614	41.0		
Helder			29.75	755.6	47.7	8.7		WSW			4					0.366	9.3		
Utrecht			29.78	756.5	51.1	10.6	87	WSW			5		8			0.449	11.4	Very cloudy	

Note.—The originals give the wind-pressure in kilograms per square meter; for Utrecht, they give the weather as published, from which the amount of cloudiness is taken by the scale 0 to 4, without distinguishing between upper and lower clouds. It is assumed that the barometer readings have been reduced to sea-level.

NORWEGIAN SERIES.

Furnished by the coöperation of Professor H. Mohn, Director of the Royal Norwegian Meteorological Institute at Christiania.

Bergen			29.35	745.5	40.3	4.6	100	SSE	14.3	6.4			10			0.689	17.5	Raining	
Brönö			29.60	751.8	25.5	— 3.6	89	Calm	0	0			10					Snowing	
Christiania			29.42	747.3	34.2	1.2	100	Calm	0	0			10			0	0	Foggy	
Tromsö			29.34	745.1	38.5	3.6	82	SW	8.9	4			10			0.276	7.0		

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols. The cloudiness and weather at Bergen refer to 2h., p. m., local time, instead of 1h., 4 min.

PORTUGUESE SERIES.

Furnished by the coöperation of J. C. de Brito Capello, Director of the Meteorological Observatory of the Infante Don Luiz at Lisbon.

STATIONS.	Barometer, corrected for instrum'tal error and temperature.		Barometer, reduced to sea-level.		Temperature of the air.		Relative Humidity.	Wind. Direction.	Wind. Velocity.		Wind. Force.	Clouds. Amount. Up'er	Clouds. Amount. Low'r	Clouds. Direction. Upper.	Clouds. Direction. Lower.	Rain-fall or melted snow in the past 24 hours.		Weather.	Observer.
	Inches.	Millimeters.	Inches.	Millimeters.	Fahrenheit.	Centigrade.	Per cent.	From—	Miles per hour.	Meters per second.	0—10.	0—10.	0—10.	From—	From—	Inches.	Millimeters.		
Angra, (Azores)			30.00	762.0	49.6	9.8	72	N	4.9	2.2			5			0.122	3.1		Dr. J. A. Sampaio.
Campo Major			29.92	759.9	60.8	16.0	68	E	16.1	7.2			8	SSW		0	0		Dr. A. M. R. dos Santos.
Funchal, (Madeira)			29.85	758.3	60.8	16.0	62	WSW	21.7	9.7			3			0.532	13.5		Capt. D. A. de Cunha.
Lisbon			29.83	757.7	59.5	15.3	79	E	8.7	3.9			10	SSE		0.256	6.5		The Observatory.
Ponta Delgada, (Azores)			29.99	761.8	51.8	11.0	63	NW	3.8	1.7			3			0.276	7.0		

Note.—The originals give the wind-velocity in kilometers per hour; occasionally, the weather by the Vienna symbols; the amount of cloudiness without distinguishing between upper and lower clouds; the barometer corrected but not reduced to sea-level. The rain-fall at Libson is measured at noon, instead of 0 h. 6 m., p. m.

RUSSIAN SERIES.

Furnished by the cooperation of Professor H. Wild, Director of the Imperial Central Physical Observatory of Russia, at St. Petersburg.

Warsaw			29.96	760.9	46.0	7.8	79	S	11	5			10						Astronomical Obs.
Wilna																			Astronomical Obs.
Dorpat			29.55	750.5	38.8	3.8	93	SSW	13	6			10						Physical Cabinet.
St. Petersburg			29.53	750.1	36.1	2.3	97	SSW	20	9			10						Central Physical Obs.
Kuopio			29.38	746.2	32.2	0.1	100	S	13	6			10					Snowing	Ch. Forsten.
Kieff			30.33	770.3	28.9	— 1.7	100	S	7	3			10						Physical Cabinet.
Nikolaiev			30.53	775.4	35.8	2.1	94	ENE	7	3			10						Kurdakof
Kertch			30.43	772.8	35.1	1.7	91	NE	11	5			10						Lagorio.
Moscow			30.21	767.2	35.2	1.8	91	SSW	7	3			10						Meteorological Obs.
Lugan			30.43	772.9	34.3	1.3	92	E	7	3			10			Blank	Blank		Meteorological Obs.
Archangel			29.49	749.1	34.7	1.5	96	SSW	22	10			10						Ogorodnikof.
Tiflis	28.95	735.4	30.43	773.0	38.7	3.7	69	SE	4	2			0						Physical Observatory.
Astrakhan			30.54	775.7	36.0	2.2	63	ENE	2	1			1						Sebastianof.
Kasan			30.41	772.4	30.0	— 1.1	98	SW	7	3			10						Physical Cabinet.
Orenburg			30.84	783.4	— 6.7	—21.5	64	E	13	6			10						Tschernischef.
Ekaterinburg	29.48	748.9	30.50	774.6	23.2	— 4.9	95	Calm	0	0			10						Meteorogical Obs.
Nukuss			30.49	774.5	33.4	0.8	68	NNE	4	2			0						
Kasaly																			Bobrof.
Tashkend																			Michelson.
Barnaul			31.21	792.7	—26.7	—32.6	80	NE	0	0			0						Meteorological Obs.
Yeniseisk			30.91	785.0	—37.3	—38.5	71	Calm	0	0			0						Marks.
Irkutsk																			Usolzef.
Peking, (China)			30.27	768.8	24.3	— 4.3	73	Calm	0	0			0						Physical Observatory.
Nertchinsk	27.94	709.8	30.35	770.9	—22.2	—30.1	93	W	4	2			0			Blank	Blank		Meteorological Obs.
Vladivostock			30.30	769.7	16.7	— 8.5	82	NW	7	3			0						
Nikolaievsk, on the Amoor					0.5	—17.5		Calm	0	0			5						

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols; they omit the rain-fall. The elevation of Tiflis is 409 meters, or 1,341.8 feet; Ekaterinburg, 306.4? m., or 1,005.2? ft.; Tashkend, 494.2? m., or 1,621.3? ft.; Irkutsk, 392 m., or 1,286 ft.; Nertchinsk, 592.0? m., or 1,942.2? ft.; Oorga, 1,281.0? m., or 4,202.6? ft.

SPANISH SERIES.

Furnished by the cooperation of Antonio Aguilar, Director of the Royal Observatory at Madrid, and of Don Cecilio Pujazon, Captain R. N. Director of the Naval Observatory at San Fernando.

Madrid			30.11	764.7	56.1	13.4	68	NE	10.4	4.66		4	2	SW		0	0	Cloudy	Royal Observatory.
San Fernando			29.90	759.5	66.2	19.0	62	ESE	19.0	8.5		1	4	SW	SE	0	0		Naval Observatory.

Note.—The originals give the weather in general terms, as published; rain-fall for San Fernando from preceding to following midnight; wind-velocity for Madrid in kilometers per hour.

SWEDISH SERIES.

Furnished by the cooperation of Professor R. Rubenson, Director of the Royal Swedish Meteorological Institute, at Stockholm, and of Dr. H. H. Hildebrandsson, Chief of the Meteorological Division of the Upsala Observatory.

Haparanda			29.48	748.8	16.5	— 8.6	100	N			2		10			0.236	6.0	Snowing	
Umea			29.45	747.9	21.2	— 6.0	95	N			4		10			0	0		
Hernosand			29.34	745.1	31.6	— 0.2	92	Calm			0		10			0.106	2.7	Foggy	
Stockholm			29.44	747.7	36.5	2.5	98	WNW			2		10			0.079	2.0		
Wisby			29.54	750.4	37.4	3.0	100	SW			4		10			0.496	12.6	Foggy	
Sub-Series.																			
Upsala			29.43	747.5	35.8	2.1	98	W	6.5	2.9			10			0.001	0.03		Dr. Hildebrandsson.

Note.—The originals give the wind-force by the scale 0 to 6, and Upsala also velocity in meters per second; occasionally, the weather by the Vienna symbols, or in general terms; no distinction between the amount of upper and lower clouds. The rain-fall is measured at 8 a. m., local time.

SWISS SERIES.

Furnished by the coöperation of Professor R. Wolf, Director of the Observatory at Zurich, and of Professor E. Plantamour, Director of the Observatory at Geneva.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Geneva	28.75	730.3	30.16	766.0	61.5	16.4	52	SSW	.....	.....	6	.....	7	.....	.....	0	0	Cloudy	The Observatory.
Zurich	28.52	724.3	30.14	765.6	57.7	14.3	55	SW	.....	.....	2	.....	7	.....	.....	0	0	Cloudy.....	The Observatory.

Note.—For Geneva the corresponding departures from the normal values are: Barometer, +2.6 mm; Thermometer, +15.1 cent.; Relative Humidity, —28 per cent.

Note.—The rain-fall is measured at Zurich at 7 a. m. on the following day. The originals give the barometer corrected but not reduced to sea-level; the wind-force by the scale 0 to 4 for Zurich; the amount of cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The elevation of Geneva is 408 meters, or 1,339 feet, and that of Zurich 470 meters, or 1,542 feet.

TURKISH SERIES.

Furnished by the coöperation of A. Coumbary, Effendi, Director of the Central Observatory at Constantinople, and of Professor C. V. A. Van Dyck, Superintendent of the Lee Observatory at Beirut.

Constantinople	.....	.....	30.40	772.1	46.6	8.1	82	ENE	7	3.0	.....	.....	10	.....	NE	0	0	.....	
Fao, (Persian Gulf)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Salonica	.....	.....	30.42	772.6	64.4	18.0	.....	NE	.....	.....	1	.....	0	.....	.....	.....	.....	.....	
Valona	.....	.....	30.35	770.8	57.6	14.2	.....	W	.....	.....	1	.....	0	.....	.....	.....	.....	.....	
Varna	.....	.....	30.28	769.0	42.8	6.0	.....	SE	.....	.....	1	.....	10	.....	.....	.....	.....	Dense fog....	
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y	.....	.....	30.07	763.8	64.9	18.3	68	NNE	.....	.....	1	.....	1c	.....	.....	0	0	Blue sky.....	Prof. C. V. A. Van Dyck

Note.—The originals give the wind-force by the scale 0 to 7, (except Beirut, by the scale 0 to 12, and Constantinople velocity in meters per second;) the weather in general terms as published; no distinction between upper and lower clouds, and, except Constantinople and Beirut, the amount by the scale 0 to 4. It is assumed that the barometer is reduced to sea-level.

CANADIAN SERIES.

Furnished by the coöperation of Professor G. T. Kingston, Director of the Magnetic Observatory at Toronto, and Superintendent of the Meteorological Office of the Dominion of Canada, and the respective Observers. Those marked with a star (*) are also telegraphed daily to the office of the Chief Signal Officer, U. S. Army.

Bathurst, N. B	.....	.....	29.63	752.6	8.5	—13.1	73	NW	10	4.5	.....	.....	0	.....	.....	0	0	.....	Hon. J. Ferguson.
Brockville, Ontario	.....	.....	30.24	768.1	—10	—23.3	.....	Calm	0	0	.....	.....	10s	.....	NW	0.25	6.3	Cloudy.....	W. R. Bigg.
*Chatham, N. B	.....	.....	29.68	753.9	12	—11.1	90	W	5	2.2	.....	0	0	.....	.....	0.18	4.6	Clear.....	G. A. Blair.
Charlottetown, P. E. Island	.....	.....	29.61	752.1	33	0.6	91	W	12	5.4	.....	0	5ks	.....	.....	0.05	1.3	Fair	H. J. Cundall, C. E.
Cornwall, Ontario	.....	.....	30.25	768.3	—18.8	—28.2	100	W	.....	.....	1	0	1s	.....	.....	0	0	Bright.....	James Smith, M. A.
Dalhousie, N. B	.....	.....	29.72	754.9	.....	.....	.....	W	.....	.....	4	.....	.....	.....	.....	0.10	2.5	Overcast.....	H. A. Johnson.
Esquimaltt, B. C	.....	.....	30.11	764.8	44.3	6.8	100	N	.....	.....	.....	.....	10n	.....	.....	0.25	6.3	Rainy.....	W. H. Bevis.
Fredericton, N. B	.....	.....	29.65	758.2	14.6	— 9.7	71	NW	18	8.0	.....	.....	10n ?	.....	.....	0.145	3.69	Clear?.....	Prof. Harrison.
*Fort Garry, Manitoba	.....	.....	29.82	757.4	—28	—33.3	89	SE	6	2.7	.....	0	0	.....	.....	0	0	Clear	James Stewart.
Goderich, Ontario	.....	.....	30.21	767.3	7.0	—13.9	91	NW	.....	.....	2	10k	0	W	.....	0.10	2.5	Dull	H. J. Strang, M. A.
Granton, Ontario	28.98	736.1	30.22	767.6	1.7	—16.8	.....	SW	.....	.....	1	.....	10n	.....	.....	0	0	Cloudy.....	James Grant.
*Halifax, N. S	.....	.....	29.68	753.9	37	2.8	84	W	18	8.0	.....	2cs	2ks	SW	.....	Inap.	Inap.	Fair	F. Allison, M. A.
Hamilton, Ontario	.....	.....	30.24	768.1	27	— 2.8	78	NW	.....	.....	1	0	0	.....	.....	0	0	Clear	G. Dickson.
Heart's Content, N. F	.....	.....	29.83	757.7	39	3.9	82	S	.....	.....	3	.....	10	.....	.....	0	0	Overcast.....	E. Weedon.
*Kingston, Ontario	.....	.....	30.27	768.8	— 6	—21.1	81	NE	1	0.4	.....	10cs	0	W	.....	0.14	3.6	Cloudy	S. Woods, M. A
*Montreal, Quebec	.....	.....	30.21	767.3	—13	—25.0	100	W	16	7.2	.....	0	0	.....	.....	0.15	3.8	Clear	C. H. McLeod, C. E.
*Ottawa, Ontario	.....	.....	30.18	766.6	—23	—30.6	92	S	2	0.9	.....	2cs	0	SW	.....	Inap.	Inap.	Clear.....	J. B. Haney.
*Parry Sound, Ontario	.....	.....	30.20	767.1	—16	—26.7	64	E	4	1.8	.....	0	2ks	.....	E	0	0	Fair	Rev. R. Mosley.
Port Dover, Ontario	.....	.....	30.26	768.6	5	—15.0	90	W	3	1.3	.....	10k	0	SW	.....	0.11	2.8	Cloudy.....	H. Morgan.
Port Hastings, N. S	.....	.....	29.64	752.8	38.7	3.7	.....	NW	10	4.5	.....	.....	.....	.....	.....	0	0	Fine.....	Peter Grant.
Port Stanley, Ontario	.....	.....	30.21	767.3	8	—13.3	83	W	8	3.6	.....	.....	10n	.....	W	0.10	2.5	Cloudy	M. Payne.
*Quebec, Quebec	.....	.....	30.08	764.0	— 9	—22.8	79	W	10	4.5	.....	0	0	.....	.....	0	0	Clear	Capt. Ashe, R. N.
*Rockliffe, Ontario	.....	.....	30.24	768.1	—29	—33.9	100	Calm	0	0	.....	8cs	0	W	.....	0	0	Clear?.....	
St. John, N. B	.....	.....	29.93	760.2	20	— 6.7	78	NW	17	7.6	.....	5k	0	.....	.....	0	0	Fine.....	G. Murdoch, C. E.
*Saugeen, Ontario	.....	.....	30.11	764.8	9	—12.8	69	W	6	2.7	.....	.....	10n	.....	W	0.35	8.9	Cloudy.....	K. Stewart.
Stayner, Ontario	.....	.....	30.11	764.8	— 8	—22.2	96	SE	1	0.4	.....	2c	0	NW	.....	Inap.	Inap.	Fair	R. J. Cole.
Stratford, Ontario	28.78	731.0	30.22	767.6	1.3	—17.1	94	SW	7	3.1	.....	.....	10s	.....	.....	0.05	1.3	Cloudy.....	C. J. MacGregor, M. A
*Sydney, C. B	.....	.....	29.61	752.1	39	3.9	87	SW	15	6.7	.....	8c	2s	W	SW	0.12	3.0	Fair	T. C. Hill.
*Toronto, Ontario	.....	.....	30.22	767.6	4	—15.6	84	W	10	4.5	.....	0	2ks	.....	W	0.03	0.8	Clear	Magnetic Observatory.
Woodstock, Ontario	.....	.....	30.21	767.3	2.9	—16.2	97	W	9	4.0	.....	.....	10s	.....	.....	0	0	Cloudy	J. Montgomery.
Sub-Series.																			
St. Johns, Newfoundland	.....	.....	29.98	761.5	36.0	2.2	100	S	.....	.....	.....	10k	10s	.....	.....	0	0	Threatening	John Delany

Note.—The originals for Brockville, Charlottetown, Port Dover, Port Stanley, St. Johns, N. F., Stayner and those telegraphed, give the amount of cloudiness by the scal

UNITED STATES SERIES.

Furnished by the coöperation of Bvt. Brig. Gen. Albert J. Myer, Chief Signal Officer, U. S. Army.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Albany, N. Y.	.....	.....	30.13	765.3	3	—16.1	72	NW	1	0.4	.....	0	2s	.....	.....	0.07	1.8	Clear	
Alpena, Mich.	.....	.....	30.16	766.1	—14	—25.6	72	W	1	0.4	.....	0	0	.....	.....	0	0	Clear	
Atlantic City, N. J.	.....	.....	30.24	768.1	15	— 9.4	64	NW	16	7.2	.....	1c	2s	SW	SW	Inap.	Inap.	Fair	
Augusta, Ga.	.....	.....	30.17	766.3	27	— 2.8	76	NW	6	2.7	.....	0	5s	.....	NW	0.01	0.3	Fair	
Baltimore, Md.	.....	.....	30.28	769.1	15	— 9.4	65	NW	4	1.8	.....	Haze	2s	.....	.....	0	0	Fair	
Barnegat, N. J.	.....	.....	30.22	767.6	15	— 9.4	83	NW	20	8.9	.....	2c	2s	W	.....	Inap.	Inap.	Fair	
Bismarck, Dakota	27.75	704.8	29.54	750.3	— 4	—20.0	82	Calm	0	0	.....	8k	0	NW	.....	0.37	9.4	Fair	
Boston, Mass.	.....	.....	30.09	764.3	15	— 9.4	65	W	19	8.5	.....	5ck	1s	SW	.....	Inap.	Inap.	Fair	
Breckenridge, Minn.	.....	.....	29.69	756.7	— 9	—22.8	56	E	8	3.6	.....	0	0	.....	.....	Inap.	Inap.	Clear	
Buffalo, N. Y.	.....	.....	30.20	767.1	7.0	—13.9	88	W	10	4.5	.....	.....	10s	.....	W	0.11	2.8	Cloudy	
Burlington, Vt.	.....	.....	30.23	767.8	— 6	—21.1	61	NE	4	1.8	.....	0	2s	.....	.....	0.38	9.7	Fair	
Cairo, Ill.	.....	.....	30.27	768.8	— 1	—18.3	84	SE	8	3.6	.....	8cs	0	.....	.....	0	0	Fair	
Cape Hatteras, N. C.	.....	.....	30.08	764.0	32	0.0	79	N	33	14.8	.....	.....	10n	.....	N	0.02	0.5	Light rain	
Cape Henry, Va.	.....	.....	30.22	767.6	22	— 5.6	86	N	32	14.3	.....	.....	10s	.....	NW	0.05	1.3	Cloudy	
Cape Lookout, N. C.	.....	.....	30.16	766.1	31	— 0.6	89	NE	32	14.3	.....	.....	10n	.....	NE	0.01	0.3	Light Sleet	
Cape May, N. J.	.....	.....	30.23	767.8	17	— 8.3	83	N	24	10.7	.....	2c	0	NW	.....	0.01	0.3	Fair	
Charleston, S. C.	.....	.....	30.12	765.0	40	4.4	73	NW	6	2.7	.....	.....	10s	.....	.....	0	0	Cloudy	
Cheyenne, Wyoming	23.58	598.9	29.52	749.8	38	3.3	56	NW	44	19.7	.....	0	0	.....	.....	0	0	Clear	
Chicago, Ill.	.....	.....	30.11	764.8	7	—13.9	77	S	6	2.7	.....	.....	10s	.....	.....	0	0	Cloudy	
Cincinnati, Ohio	.....	.....	30.30	769.6	— 4	—20.0	82	S	4	1.8	.....	0	Sm'e	.....	.....	0.15	3.8	Clear	
Cleveland, Ohio	.....	.....	30.31	769.9	— 3	—19.4	100	SE	8	3.6	.....	Haze	0	.....	.....	0.16	4.1	Fair	
Corsicana, Tex.	.....	.....	30.20	767.1	27	— 2.8	66	SE	7	3.1	.....	2ck	2s	.....	.....	0	0	Fair	
Davenport, Iowa	.....	.....	29.97	761.2	10	—12.2	68	S	12	5.4	.....	.....	10s	.....	.....	0	0	Cloudy	
Denison, Tex.	.....	.....	30.08	764.0	26	— 3.3	64	S	20	8.9	.....	0	0	.....	.....	0	0	Clear	
Denver, Col.	24.45	621.0	29.67	753.6	46	7.8	33	NW	16	7.2	.....	0	5s	.....	.....	0	0	Fair	
Detroit, Mich.	.....	.....	30.25	768.3	— 4	—20.0	67	SW	1	0.4	.....	10cs	0	.....	.....	0	0	Cloudy	
Dodge City, Kan.	27.10	688.3	29.47	748.5	22	— 5.6	86	W	12	5.4	.....	.....	10s	.....	.....	0	0	Cloudy	
Dubuque, Iowa	.....	.....	29.91	759.7	3	—16.1	73	SE	6	2.7	.....	.....	10n	.....	.....	Inap.	Inap.	Light snow	
Duluth, Minn.	.....	.....	29.91	759.7	—10	—23.3	77	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Eastport, Me.	.....	.....	29.87	758.7	16	— 8.9	66	NW	16	7.2	.....	0	0	.....	.....	0.05	1.3	Clear	
Erie, Pa.	.....	.....	30.23	767.8	9	—12.8	89	SW	12	5.4	.....	.....	10s	.....	.....	0.05	1.3	Cloudy	
Escanaba, Mich.	.....	.....	30.12	765.0	—15.5	—26.4	70	SW	4	1.8	.....	0	2s	.....	.....	0	0	Clear	
Fort Gibson, Indian Ter.	.....	.....	30.02	762.5	19	— 7.2	69	SE	14	6.3	.....	2cs	2s	.....	.....	0	0	Fair	
Ft. St. Michael, Alaska	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Fort Sill, Indian Ter.	28.67	728.2	29.83	757.7	25	— 3.9	48	SW	16	7.2	.....	1c	0	W	.....	0	0	Clear	
Fort Sully, Dakota	27.83	706.9	29.56	750.8	15	— 9.4	82	Calm	0	0	.....	.....	10s	.....	.....	0.07	1.8	Cloudy	
Florence, Arizona	28.49	723.6	30.05	763.3	43	6.1	.....	SW	.....	.....	.....	5c	0	N	.....	0	0	Fair	
Galveston, Tex.	.....	.....	30.25	768.3	38	3.3	63	SE	6	2.7	.....	.....	10s	.....	W	0	0	Cloudy	
Grand Haven, Mich.	.....	.....	30.10	764.5	13	—10.6	90	W	12	5.4	.....	.....	10n	.....	.....	0.08	2.0	Light snow	
Indianapolis, Ind.	.....	.....	30.28	769.1	— 6	—21.1	81	Calm	0	0	.....	0	Sm'e	.....	.....	0	0	Smoky	
Indianola, Tex.	.....	.....	30.24	768.1	33	0.6	52	NE	2	0.9	.....	.....	8s	.....	.....	0	0	Cloudy	
Jacksonville, Fla.	.....	.....	30.12	765.0	42	5.6	67	NW	7	3.1	.....	.....	10s	.....	.....	0	0	Cloudy	
Keokuk, Iowa	.....	.....	29.91	759.7	14	—10.0	81	S	15	6.7	.....	.....	10s	.....	S	0	0	Cloudy	
Key West, Fla.	.....	.....	30.10	764.5	65	18.3	100	E	4	1.8	.....	.....	10n	.....	.....	0.21	5.3	Light rain	
Kittyhawk, N. C.	.....	.....	30.19	766.8	28	— 2.2	77	N	42	18.8	.....	10k	0	N	.....	0.02	0.5	Cloudy	
Knoxville, Tenn.	.....	.....	30.33	770.4	8	—13.3	78	Calm	0	0	.....	6ck	0	E	.....	0.22	5.6	Cloudy	
La Crosse, Wis.	.....	.....	29.84	757.9	4	—15.6	100	SE	9	4.0	.....	.....	10n	.....	SE	0.05	1.3	Light snow	
Leavenworth, Kan.	.....	.....	29.78	756.4	21	— 6.1	70	S	16	7.2	.....	0	0	.....	.....	0	0	Clear	
Louisville, Ky.	.....	.....	30.33	770.4	— 4	—20.0	64	S	2	0.9	.....	0	0	.....	.....	0.20	5.1	Clear	
Lynchburg, Va.	.....	.....	30.30	769.6	16	— 8.9	67	NW	1	0.4	.....	0	0	.....	.....	0	0	Clear	
Malone, N. Y.	.....	.....	30.19	766.8	— 8	—22.2	61	Calm	0	0	.....	5k	0	W	.....	0.30	7.6	Fair	
Marquette, Mich.	.....	.....	30.04	763.0	— 7	—21.7	63	W	8	3.6	.....	0	0	.....	.....	0	0	Clear	
Memphis, Tenn.	.....	.....	30.30	769.6	7	—13.9	77	SE	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Milwaukee, Wis.	.....	.....	30.14	765.5	— 7	—21.7	81	SW	4	1.8	.....	.....	10n	.....	.....	Inap.	Inap.	Light snow	
Mobile, Ala.	.....	.....	30.28	769.1	20	— 6.7	55	N	8	3.6	.....	0	0	.....	.....	Inap	Inap.	Clear	
Montgomery, Ala.	.....	.....	30.32	770.1	17	— 8.3	83	NW	6	2.7	.....	0	0	.....	.....	0.13	3.3	Clear	
Morgantown, W. Va.	29.13	739.9	30.20	769.4	12	—11.1	70	Calm	0	0	.....	0	Sm'e	.....	.....	0.47	11.9	Clear	
Mt. Washington, N. H.	23.06	585.7	29.42	747.3	—22	—30.0	30	NW	96	42.9	.....	0	0	.....	.....	0	0	Clear	
Nashville, Tenn.	.....	.....	30.35	770.9	— 4	—20.0	100	Calm	0	0	.....	.....	Fog	.....	.....	0.01	0.3	Foggy	
New Haven, Conn.	.....	.....	30.20	767.1	13	—10.6	65	N	12	5.4	.....	Haze	0	.....	.....	0	0	Clear	
New London, Conn.	.....	.....	30.14	765.5	16	— 8.9	49	NW	10	4.5	.....	1c	1k	W	W	0	0	Clear	
New Orleans, La.	.....	.....	30.27	768.8	28	— 2.2	62	NE	6	2.7	.....	0	0	.....	.....	Inap	Inap.	Clear	
Newport, R. I.	.....	.....	30.12	765.0	17	— 8.3	67	NW	18	8.0	.....	0	5ks	.....	W	0.01	0.3	Fair	
New York, N. Y.	.....	.....	30.23	767.8	15	— 9.4	65	NW	5	2.2	.....	0	Sm'e	.....	W	Inap	Inap.	Clear	
Norfolk, Va.	.....	.....	30.26	768.3	21	— 6.1	71	N	20	8.9	.....	.....	10s	.....	NW	0.11	2.8	Cloudy	
North Platte, Neb.	26.61	675.9	29.15	740.4	35	1.7	100	W	16	7.2	.....	.....	10n	.....	.....	0.10	2.5	Light rain	
Omaha, Neb.	28.47	723.1	29.58	751.3	26	— 3.3	77	SW	12	5.4	.....	0	8s	.....	SW	0.01	0.3	Cloudy	
Oswego, N. Y.	.....	.....	30.16	766.1	15	— 9.4	91	NE	12	5.4	.....	.....	10n	.....	.....	0.16	4.1	Heavy snow	
Pembina, Dakota	.....	.....	29.74	755.4	—21	—29.4	62	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Philadelphia, Pa.	.....	.....	30.28	769.1	13	—10.6	62	NE	11	4.9	.....	Haze	1s	.....	.....	Inap	Inap	Hazy	
Pike's Peak, Col.	17.37	441.2	29.58	751.3	9	—12.8	100	NW	30	13.4	.....	.....	Fog	.....	NW	0.01	0.3	Foggy	
Pittsburgh, Pa.	.....	.....	30.27	768.8	10	—12.2	79	W	4	1.8	.....	0	0	.....	.....	0.07	1.8	Clear	
Port Huron, Mich.	.....	.....	30.20	767.1	5	—15.0	63	S	8	3.6	.....	.....	70s	.....	SW	Inap	Inap.	Cloudy	
Portland, Me.	.....	.....	30.03	762.7	14	—10.0	63	NW	6	2.7	.....	0	Haze	.....	.....	0.03	0.8	Clear	
Portland, Oregon	.....	.....	30.18	766.6	45	7.2	92	N	1	0.4	.....	.....	10s	.....	.....	0	0	Cloudy	
Punta Rassa, Fla.	.....	.....	30.09	764.3	62.6	16.9	94	NW	11	4.9	.....	.....	10s	.....	.....	0	0	Cloudy	
Rochester, N. Y.	.....	.....	30.19	766.8	8	—13.3	78	W	12	5.4	.....	0	2s	.....	W	0.12	3.0	Clear	
Salt Lake City, Utah	25.68	652.3	30.01	762.2	38	3.3	90	SE	4	1.8	.....	.....	10n	.....	.....	0.02	0.5	Light rain	
Sandy Hook, N. J.	.....	.....	30.20	767.4	15	— 9.4	64	NW	20	8.9	.....	0	0	.....	.....	0	0	Clear	
San Diego, Cal.	.....	.....	30.04	763.0	46	7.8	77	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
San Francisco, Cal.	.....	.....	30.11	764.8	51	10.6	72	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Santa Fé, N. M.	23.12	587.2	29.66	753.4	28	— 2.2	67	NW	7	3.1	.....	0	5s	.....	.....	0	0	Fair	
Savannah, Ga.	.....	.....	30.16	766.1	32	0.0	69	NW	8	3.6	.....	8c	0	SW	.....	0.09	1.5	Fair	
Shreveport, La.	.....	.....	30.33	770.4	21	— 6.1	85	SE	3	1.3	.....	Haze	5s	.....	.....	0	0	Fair	
Smithville, N. C.	.....	.....	30.14	765.5	33	0.6	89	N	12	5.4	.....	.....	10ks	.....	N	0.01	0.3	Cloudy	
Springfield, Mass.	.....	.....	30.18	766.6	14	—10.0	62	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
St. Louis, Mo.	.....	.....	30.16	766.1	2	—16.7	72	S	12	5.4	.....	0	0	.....	.....	0	0	Clear	
St. Marks, Fla.	.....	.....	30.20	767.1	27	— 2.8	67	N	12	5.4	.....	0	0	.....	.....	0	0	Clear	
St. Paul, Minn.	.....	.....	29.75	755.6	— 2	—18.9	84	E	12	5.4	.....	.....	10n	.....	.....	Inap	Inap.	Light snow	
St. Paul's Island, Alaska	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Thatcher's Island, Mass.	.....	.....	30.08	764.0	18	— 7.8	37	NW	24	10.7	.....	5ck	0	W	.....	0	0	Clearing	
Toledo, Ohio	.....	.....	30.24	768.1	0	—17.8	69	S	13	5.8	.....	0	Haze	.....	S	0.01	0.3	Hazy	
Tucson, Arizona	27.58	700.5	30.13	765.3	30	— 1.1	.....	SE	.....	.....	.....	8c	0	NW	.....	0	0	Cloudy	
Tybee Island, Ga.	.....	.....	30.12	765.0	30	— 1.1	79	NW	16	7.2	.....	2cs	0	NW	.....	0	0	Fair	
Vicksburg, Miss.	.....	.....	30.34	770.6	18	— 7.8	83	Calm	0	0	.....	8cs	Sm'e	.....	SE	0	0	Fair	
Virginia City, M. T.	23.98	609.1	29.46	748.3	45	7.2	53	SW	25	11.3	.....	.....	8ks	.....	NW	0.01	0.3	Cloudy	
Washington, D. C.	.....	.....	30.31	769.9	11	—11.7	61	N	5	2.2	.....	0	1s	.....	.....	0	0	Clear	
Wilmington, N. C.	.....	.....	30.13	765.3	33	0.6	79	N	11	4.9	.....	.....	10s	.....	NE	0	0	Threatening	

UNITED STATES SERIES.—Continued.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Upper. 0—10.	Clouds. Amount. Low'r. 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Wood's Holl, Mass.	.....	.....	30.09	764.3	21	— 6.1	56	NW	18	8.0	.....	.....	10s	.....	NW	0	0	Cloudy	
Yankton, Dakota	28.27	718.0	29.59	751.6	23	— 5.0	86	W	10	4.5	.....	.....	10s	.....	.....	0.02	0.5	Cloudy	
Yuma, Arizona	.....	.....	30.05	763.3	56	13.3	.....	E	.....	.....	.....	0	2s	.....	NE	0	0	Fair	
Sub-Series.																			
Kingston, Jamaica, W. I.	.....	.....	30.17	766.3	77	25.0	78	Calm	0	0	.....	2c	2s	SE	.....	0	0	.....	James Gall.
Navassa, W. I.	.....	.....	.....	.....	79	26.1	.....	E	.....	.....	3	.....	.....	.....	.....	0	0	Clear	F. M. Everett.
Clifton, Ja., W. I.	27.20	690.9	30.00	762.0	65	18.3	89	SE	0.5	0.2	.....	2c	0	SE	.....	0.20	5.1	Fine	C. Partridge.
Paramaribo, D. Guiana, S.A.	.....	.....	30.09	764.3	83	28.3	79	E	.....	.....	3	3c	5k	E	.....	0	0	.....	C. J. Hering.
Batavia, Dutch Guiana, S.A.	30.07	763.7	.....	.....	78.4	25.8	.....	NE	.....	.....	.....	.....	.....	.....	.....	0	0	½ cloudy	Dr. H. Groot.
Medellin, Colombia, S. A.	25.24	641.1	.....	.....	65.0	18.3	83	Calm	.....	.....	0	1cs	2ks	.....	.....	0	0	Fair	Thomas Herran.
York Factory, B. A.	.....	.....	29.33	745.0	—19.0	—28.3	100	N	20	8.9	.....	.....	10m	.....	.....	0.07	1.8	Snowing	J. Fortescue, W. Wood.
Honolulu, Oahu, H. I.	.....	.....	29.92	760.0	74	23.3	95	SSE	.....	.....	5	.....	.....	.....	.....	0	0	Cloudy	Daniel Smith.
Makawao, Maui, H. I.	.....	.....	29.81	757.2	58	14.4	81	S	.....	.....	1	0	3k	.....	.....	2.05	52.1	.....	F. L. Clarke.

Marine Series.	True course towards.	Hourly rate in knots.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Upper. 0—10.	Clouds. Amount. Low'r. 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	State of ocean.	Direction of swell from—	Weather.	Observer.
Schooner Addie Fuller, Tarpaulin Cove.	W by S	4	30.04	763.0	20	— 6.7	85	NNW	12	5.4	.....	.....	8s	.....	.....	.....	.....	Cloudy	Capt. James Jorgensen.

Note.—The originals give the cloudiness by the scale 0 to 4, except York Factory, Medellin and Paramaribo. The elevation of the barometer at Bismarck is 1,677 feet, or 511.1 meters; Cheyenne, 6,057.3 ft., or 1,846.2 m.; Clifton, about 2,892 ft., or 881.5 m.; Denver, 5,136 ft., or 1,565.2 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Florence, 1,550 (?) ft. or 472.5 (?) m.; Makawao, 2,205 ft., or 672.1 m.; Morgantown, 1,027.9 ft., or 313.3 m.; Medellin, 4,876 ft., or 1,486.2 m.; Mt. Washington, 6,285 ft., or 1,915.6 m.; North Platte, 2,846 ft., or 867.4 m.; Omaha, 1,054.6 ft., or 321.4 m.; Pike's Peak, 14,150.7 ft., or 4,313.1 m.; Salt Lake City, 4,362.2 ft., or 1,329.6 m.; Santa Fé, 6,862.2 (?) ft., or 2,091.6 (?) m.; Tucson, 2,513 (?) ft., or 770.1 (?) m.; Virginia City, 5,480 (?) ft., or 1,670.3 (?) m.; Yankton, 1,278 ft., or 389.5 m. The following constants are added in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Denver, 5.22 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fé, 6.54 in.; Tucson, 2.59 in.; Virginia City, 5.48 in. The elevation of Batavia is about 6 feet; the barometric readings need the addition of 0.2 mm. or 0.01 in. for reduction to sea-level.

UNITED STATES NAVAL SERIES.

By authority of the **SECRETARY OF THE NAVY.**

Furnished by the coöperation of the Navy Department, through Commodore Daniel Ammen, U. S. N., Chief of Bureau of Navigation.

STATIONS AND VESSELS.	True course toward—	Hourly rate in knots.	*Barometer as reported.		Temperature of the Air.		Relative Humidity.	Wind.			Clouds.				Rain-fall or melted snow in the past 24 hours.		State of Ocean.	Direction of swell from—	Weather.	Observer.
								Direction.	Velocity		Force.	Amount.		Direction.							
												Up'er	Low'r	Up'er	Low'r						
			Inches.	Millimeters.	Fahrenheit.	Centigrade.	Per cent.	From—	Miles per hour.	Meters per second.	0—10.	0—10.	0—10.	From—	From—	Inches.	Millimeters.				
Naval Academy, Annapolis, Md.			29.88	758.9	13	—10.6	80	N			3		1		S	0	0			Clear.	
Navy Yard, Norfolk, Va.			30.30†	769.6†	22	— 5.6		N			6-7		8ks		S S					Snowing.	
Navy Yard, Pensacola, Fla.			30.21	767.3	21	— 6.1		NNW			2		3		NE					‡D. clouds.	
Navy Yard, Portsmouth, N.H.			30.00	762.0	10	—12.2		WNW			5				E					Pleasant.	
Navy Yard, Wash'gton, D. C.			30.32	770.1	13	—10.6		W			1		0							Clear.	
Ajax																					
Port Royal, S. C.			30.09	764.3	40	4.4		NW			2		6		S	Blank	Blank	Light	S	Pleasant.	
Alarm, New York, N. Y.			29.83†	757.7†	14	—10.0		NNW			4		2			0	0			Clear	
Colorado, New York, N. Y.			30.26	768.6	15	— 9.4		NNW			1		Haze			0	0			Blue sky.	
Despatch, Washington, D. C.			30.31†	769.9†	11	—11.7		Calm			0		0							Clear	
Franklin, New York, N. Y.			30.26	768.6	20.0	— 6.7	92	NW			4		2c					Smooth		‡D. clouds.	
Hartford, Hampton Roads, Va.			30.38†	771.6†	22	— 5.6		NNW			5-6		9		NE	0.126	3.18	Moderate.	N	Overcast.	
Huron, Port Royal, S. C.			30.13	765.3	33.6	0.8	95	WNW			3		4							‡D. clouds.	
Intrepid, New York, N. Y.			30.24	768.1	15	— 9.4		NNW			4		3							Clear	
Michigan Erie, Pa.			30.23	767.5	9	—12.8	89	SW			3		10							Cloudy	
Minnesota, New York, N. Y.			30.31	769.9	15	— 9.4	100	NW			4		1		NNW					Clear	
Monongahela, Baltimore, Md.			30.23	767.8	15	— 9.4		NNW			1		-8			Blank	Blank			Hazy	
New Hampshire, Port Royal, S. C.			30.23	767.8	34	1.1		NW			3		3		NW			Smooth		‡D. clouds.	
Santee, Annapolis, Md.			29.84†	757.9†	16	— 8.9		N			3		1		S					Clear.	
St. Louis, League Island, Pa.			30.09	764.3	16.5	— 8.6		NNW			4		4		SE	0	0			Fair	
Swatara, New York, N. Y.			30.32	770.1	12	—11.1		NW			2		1s		NE					‡D. clouds.	
Tallapoosa, Washington, D. C.			30.13	765.3	13	—10.6		NW			1		4							‡D. clouds.	
Wabash, Boston, Mass.			30.12	765.0	18	— 7.8		WNW			3		5							Hazy.	
Wyoming, Washington, D. C.			30.74†	780.8†	10	—12.2		NNE			1		1							‡D. clouds.	

* It is not known that the barometer is corrected for temperature, instrumental error or elevation. † Aneroid Barometer. ‡ Detached clouds.

COLLATED AT THE OFFICE OF THE CHIEF SIGNAL OFFICER OF THE ARMY, WASHINGTON, D. C.

The records which appear in this Bulletin are copied from the regular exchanges of this office, made in each instance in compliance with an especial request, and are published for the uses of the coöperating observers. The barometric readings in the first two columns are reduced to freezing and their respective standards; those in the second two also to mean sea-level. The "weather" is generally published as given.

When the distinction between the upper and lower strata of clouds is not reported, the *kinds* or *types*, viz: cirrus, cumulus, stratus, nimbus, scud, fracto, pallio, haze, fog and smoke, as indicated, respectively, by the letters c, k, s, n, d, f, p, hz., fg. and sm'e, are generally published with the amount in the lower-cloud column. The distinction between the upper and lower strata is carefully made in the United States Series and a portion of the Canadian Series, and the types are indicated by the above letters or their combinations in the proper column.

Albert J. Myer

Brig. Gen. (Bvt. Assg^d.) Chief Signal Officer, U. S. A.

BULLETIN

OF

INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON JANUARY 10, 1877.

7:35 A. M. WASHINGTON mean time.

6:7 A. M. MEXICO mean time.
7:7 A. M. SAN JOSE mean time.
0:6 P. M. LISBON mean time.
0:28 P. M. MADRID mean time.
0:48 P. M. GREENWICH mean time.
0:53 P. M. PARIS mean time.
1:1 P. M. BRUSSELS mean time.
1:4 P. M. UTRECHT mean time.
1:18 P. M. BERNE mean time.
1:26 P. M. CHRISTIANIA mean time.
1:33 P. M. COPENHAGEN mean time.
1:33 P. M. ROME mean time.
1:37 P. M. BERLIN mean time.
1:49 P. M. VIENNA mean time.
1:55 P. M. STOCKHOLM mean time.
2:18 P. M. ATHENS mean time.
2:39 P. M. CONSTANTINOPLE mean time.
2:44 P. M. ST. PETERSBURG mean time.

ALGERIAN SERIES.

Furnished by the coöperation of General d'Eudeville, Commandant Supérieur du Génie in Algeria.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Nemours	.....	.....	30.24	768.1	76.5	24 7	19	Calm	.....	.....	0	.....	5	.....	.....	0	0	Fair	Charnot.
Algiers	.....	.....	30.24	768.2	64.4	18.0	.....	SSW	.....	.....	1	.....	2	.....	.....	0	0	Clear	Peter.
La Calle	.....	.....	30.19	766.7	72.3	22.4	52	NW	.....	.....	2	.....	2	.....	.....	0	0	Clear	Fleury.
Tunis	.....	.....	30.24	768.2	64.4	18.0	.....	NE	.....	.....	2	.....	1	.....	.....	0	0	Clear	Jacques.
Sfax	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Saida	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Tebessa	.....	.....	30.29	769.3	64.0	17.8	17	S	.....	.....	1	.....	2	.....	.....	0	0	Clear	Millot.
Geriville	.....	.....	30.27	768.9	66.2	19.0	.....	N	.....	.....	1	.....	2	.....	.....	0	0	Clear	Bourgeois.
Laghouat	.....	.....	30.29	769.4	64.6	18.1	35	N	.....	.....	1	.....	3	.....	.....	0	0	Fair	Lemaillot.
Biskra	.....	.....	30.28	769.0	67.6	19.8	19	N	.....	.....	1	.....	1	.....	.....	0	0	Clear	Guyot.
.....	.....	.....	30.29	769.4	67.5	19.7	42	NE	.....	.....	2	.....	0	.....	.....	0	0	Clear	Kuntz.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—In the originals the distinction between the amount of upper and lower clouds is apparently not made. The weather is published as given. The rain-fall is measured at 7 a. m., local time.

AUSTRIAN SERIES.

Furnished by the cooperation of Professor Ferdinand Osnaghi, Director of the Imperial and Royal Central Meteorological Institute at Vienna.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Agram	.....	.....	30.13	765.4	54.3	12.4	71	SW	.....	.....	2	.....	5	.....	.....	0	0	.....	Prof. Ivan Stoxir.
Cracow, I. R. Observatory	.....	.....	30.16	766.1	45.0	7.2	89	W	.....	.....	2	.....	5	.....	.....	0.189	4.8	.....	Dr. Wierzbiski.
Eperies	.....	.....	30.15	765.9	42.8	5.7	96	Calm	.....	.....	0	.....	10	.....	.....	0	0	Foggy	Julius Mikolik.
Gratz	28.91	734.3	30.19	766.8	46.2	7.9	79	WSW	.....	.....	2	.....	2	.....	.....	0	0	.....	Andreas Rospini.
Hermannstadt	28.74	730.0	30.21	767.3	40.6	4.8	81	SE	.....	.....	1	.....	8	.....	.....	0	0	.....	Prof. Reissenberger.
Kremsmünster	28.62	726.9	30.01	762.3	35.2	1.8	96	WSW	.....	.....	2	.....	7	.....	.....	0	0	.....	Prof. C. Wagner.
Lemberg	.....	.....	30.10	764.4	47.8	8.8	76	NW	.....	.....	1	.....	5	.....	.....	0.331	8.4	.....	Dr. T. Stanecki.
Nyiregyhaza	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Habzsuda Daniel.
Pola	.....	.....	30.24	768 0	50.5	10.3	85	WNW	.....	.....	1	.....	10s	.....	.....	0	0	.....	I.R.Hydrographic Office.
Szegedin	.....	.....	30.15	765.8	43.2	6.2	78	N	.....	.....	1	.....	10	.....	.....	0	0	.....	Karl Stancel.
Trieste	.....	.....	30.26	768.5	49.1	9.5	94	Calm	.....	.....	0	.....	10	.....	.....	0.161	4.1	Rain and fog	Prof. V. Farolfi.
Vienna	.....	.....	30.13	765.2	39.2	4.0	100	Calm	.....	.....	0	.....	10	.....	.....	0	0	Foggy	I. R. Central Met. Obs'y.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 7 p. m., local time. The elevation of Gratz is 343.5 meters, or 1,126.9 feet; Hermannstadt, 407.8 meters, or 1,337.9 feet; Kremsmünster, 383.6 meters, or 1,258.5 feet.

BELGIAN SERIES.

Furnished by the cooperation of J. C. Houzeau, Director of the Royal Observatory at Brussels.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Arlon	.....	.....	30.04	763.0	45.0	7.2	100	SSE	.....	.....	2	.....	10	.....	.....	0.461	11.7	.....	Royal Observatory.
Brussels	.....	.....	30.01	762.2	45.7	7.6	91	SSE	.....	.....	2	.....	10	.....	.....	0.283	7.20	Covered	
Furnes	.....	.....	29.98	761.4	46.0	7.8	100	ENE	.....	.....	2	.....	10	.....	.....	0.346	8.8	.....	
Ostende	.....	.....	30.09	763.4	44.6	7.0	94	WSW	.....	.....	2	.....	7	.....	.....	0.500	12.7	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—In the originals, the weather is occasionally given in general notes.

BRITISH SERIES

Furnished by the coöperation of Robert H. Scott, Esq., Director of the Meteorological Office, London, Alexander Buchan, Secretary of the Scottish Meteorological Society, Edinburgh, and the respective Observers.

STATIONS.	Barometer. Corrected for instrumental error and temperature. Inches.	Barometer. Corrected for instrumental error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force 0—10.	Clouds. Amount. Upper. 0—10.	Clouds. Amount. Lower. 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Aberdeen			30.21	767.3	33.4	0.8		WNW	8	3.6			6			0.020	0.51	*D. clouds	William Boswell.
Ardrossan			30.10	764.5	39	3.9		ENE			3		7					*D. clouds	William McNeil.
Armagh, Observatory			30.04	763.0	43.0	6.1		NE	8	3.6			10					Foggy	S. Call, for Dr. Robinson.
Birr Castle, (Parsonstown)			29.98	761.5	38.5	3.6		Calm			0		10					Overcast	J. Dreyer.
Bradford			30.05	763.3	42.3	5.7		E			1		10			0.03	0.8	Overcast	J. McLandsborough.
Bridgetown, (Barbados)			30.10	764.5	81	27.2		NE			4		5					*D. clouds	Sergt. J. F. Halanen, A. [H.C
Cambridge, Observatory			30.02	762.5	42.6	5.9		E			1		10					Overcast	H. Todd.
Cardington			30.00	762.0	41.4	5.2		E			1		10					Foggy	John McLaren.
Carlisle																			T. Bell, for J. Cartmell
Chatham, School M. E			30.00	762.0	44.2	6.8		E			0		0?					Overcast?	Maj. C. N. Martin, R.E
Dartmoor	28.28	718.3	29.71	754.6	41.6	5.3		SE			6		10					Raining	R. E. Power.
Davos Platz, (Switzerland)	24.90	d32.4			45.0	7.2	58	Calm			0		7			0	0	*D. clouds	Francis Redford, M. A.
Donaghadee			30.01	762.2	43	6.1		E			6		10					Overcast	J. Mac Gowan.
Dover			29.95	760.7	48	8 9		ENE			4		5					½ clouded	J. Costello.
Eccles, (near Manchester)			30.00	762.0	45.2	7.3		E	4.5	2.0			10					Gloomy	Thomas Mackereth.
Falmouth, Observatory			29.79	756.7	47.4	8.6		NNE			5		10					Raining	The Staff.
Fort Napier, (Natal)	27.55	699.8	29.78	756.4	79.4	26.3		E			1		10					Overcast	P'vt. G. Salmon, A. H. C
Free Town, (Sierra Leone)			29.95	760.7	86.0	30.0		NE			1		3					*D. clouds	
Galway, Queen's College			29.86	758.4	39	3.9		NE			2		3					*D. clouds	Prof. A. H. Curtis.
Gibraltar, (Mediterranean)			30.25	768.3	65.6	18.7		E			4		4					*D. clouds	Corpl. C. Aitken, A.H.C.
Glasgow, Observatory			30.11	764.8	37.4	3.0		NE			2		10					Threatening	Lewis Stuart.
Great Yarmouth			30.04	763.0	45	7.2		E			3		7					Misty	G. T. Watson.
Greenwich, Royal Obs'y			29.97	761.2	43.2	6.2		ENE			1		10					Overcast	The Staff, for G. B. Airy.
Guernsey			29.71	754.6	50	10.0		ENE			4		10					Raining	Dr. S. E. Hoskins.
Helston			29.81	757.2	48	8.9		N			4		10m			0.8	20.3	Raining	M. P. Moyle.
Holyhead			29.96	761.0	45	7.2		E			3		5					*D. clouds	John Tilston.
Kew, Observatory			29.97	761.2	44.0	6.7		ENE	13	5.8			10					Foggy	The Staff.
Kingstown			29.97	761.2	45	7.2		WNW			2		10					Foggy	George Mitchell.
Leicester Museum			30.02	762.5	43.0	6.1		E			1		10					Overcast	Wm. J. Harrison, F.G.S.
Malta, (Mediterranean)			30.25	768.3	63.4	17.4		SW			2		4k					*D. clouds	Corp'l. P. Bravis, A.H.C.
Nairn			30.18	766.6	32	0.0		Calm			0		0					Clear	W. D. Penny.
Nassau, (Bahamas)			30.13	765.3	73.0	22.8		NE			0		8					Foggy	Surg. Maj. Henry.
Nottingham, Observatory			30.03	762.7	43.4	6.3		ENE			3		10			0.007	0.18	Overcast	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			30.02	762.5	41.0	5.0		ENE			2		10			Blurd	Blank	Foggy	Rev. Stephen Whitty.
Oxford, Radcliffe Obs'y			29.96	761.0	41	5.0		ENE			1		10					Misty	J. Lucas.
Plymouth			29.80	756.9	47.3	8.5		ENE			4		10					Raining	John Merrifield.
Roche's Point			29.99	761.7	43	6.1		NNW			2		8					Foggy	W. Kennedy.
Saint Ann's Head			29.92	760.0	45	7.2		ENE			3		10					Overcast	John C. Walker.
Saint Helier, (Jersey)			29.76	755.9	50.0	10.0		E			4		10					Overcast	A. P. Amy.
Sandwick Manse, (Orkneys)			30.21	767.3	33	0.6		N	2	0.9			0					Blue sky	Rev. C. Clouston, LL. D.
Scarborough																			F. Shaw.
Scutari Cemetery, (Turkey)			30.22	767.6	50.3	10.2		NE			1		7					*D. clouds	Sergt. W. H. Lyne.
Sheffield			30.04	763.0	44.5	6.9		E			1		10			0	0	Overcast	W. F. Cooper.
Siloth Rectory			30.04	763.0	41.4	5.2	86	SE			4		8			0	0	*D. clouds	Rev. Francis Redford
Stonyhurst, Observatory			30.04	763.0	42.7	6.5		NE			1		10n					Raining	Rev. S. J. Perry.
Stornoway, Lews C., (Hebr.)			30.16	766.1	35	1.7		E			1		0					Blue sky	John Smith.
Stratfield Turgiss			29.99	761.7	41.8	5.4		Calm			0		10					Foggy	Rev. Charles H. Griffith.
Thurso			30.18	766.6	32	0.0		S			1		1					Hazy	John Trotter.
Truro, Royal Institution			29.78	756.4	47	8.3		NE			6		10					Raining	W. Newcombe.
Valencia, Observatory			29.82	757.4	44.9	7.2		S			6		6					*D. clouds	The Staff.
SUB-SERIES.																			
Calf of Man, (Isle of Man)				51	10.6			E			4		10			0	0		Henry Mercer.
Cape Good Hope, Obs'y			29.98	761.5	81.0	27.2	38	WSW	9	4.0		3	1						The Staff, for E. J. Stone.
Hobart Town, (Tasmania)			29.31	744.5	69.0	20.6	100	W			5		10n					Raining	Francis Abbott, F.R.A.S.
Leith, Restalrig Park			30.17	766.3	39.0	3.9		SE			2		10s			0.01	0.3	Overcast	Andrew Gibb.
Mauritius, Observatory			29.97	761.2	84.3	29.1	64	ENE	15.8	7.1		1	8		E			Showery	C. Meldrum.
Melbourne, Observatory			29.57	751.1	66.3	19 1	47	W	14	6.3			6			0	0	Fine	R. L. J. Ellery.
Monach L't-house, (Hebrides)			30.11	764.8	38	3.3		E			4	0	0			0	0		J. Youngclause.
North Unst, (Shetland Is.)			30.22	767.6	38	3.3		N			3	0	4						Robert Burnet.

NOTE.—Generally, the originals do not give the relative humidity, rain-fall, or distinction between upper and lower clouds. The originals give the wind direction to 32 points and weather by the Beaufort notation. The originals give the barometer for Aberdeen, Cardington, Galway, Oxford, St. Heller, Sandwick, Scarborough, Stonyhurst, Leith, Monach and North Unst as read off and the cloudiness for Stornoway by the scale 0 to 4. The wind-force is given by the scale 0 to 12 in the official series; 0 to 6 in the sub-series; except in lbs. per square foot for Greenwich and Hobart Town. The rain-fall is measured at Aberdeen at 10 a. m.; Bradford, 9 a. m.; Hobart Town, 7:30 a. m.; Nottingham, 6 p. m.; Mauritius, 9 a. m., local time. The elevation of Dartmoor is 1,400 feet, or 426.7 meters; Davos Platz, 5,105? feet, or 1,556.0? meters; Fort Napier, 2,300 feet, or 670.6 meters. *Detached clouds.

By authority of the
MINISTER OF FOREIGN AFFAIRS.

COSTA RICA SERIES.

Furnished by the coöperation of Senor Federico Muison, Director of the Central Office of Statistics and Meteorology.

San José																			

DANISH SERIES.

Furnished by the coöperation of Captain N. Hoffmeyer, Director of the Royal Danish Meteorological Institute at Copenhagen.

Copenhagen			30.02	762.5	33.8	1.0	85	WNW			2		10						
Fanöe			30.13	765.2	36.3	2.4	84	N			4		6						
Godthaab, (Greenland)			28.66	728.0	19.4	— 7.0		N			6		10					Snowing	
Stykkisholm, (Iceland)			29.80	756.8	36.9	2.7	94	S			6		8						
Thorshavn, (Faröe)			30.25	768.4	29.3	— 1.5	68	Calm			0		0						
Vestervig			30.13	765.4	30.6	— 0.8	100	NE			4		6						

NOTE.—The originals give the wind-force by the scale 0 to 6; occasionally, weather by Vienna symbols; no distinction between the amount of upper and lower clouds.

FRENCH SERIES.

Furnished by the coöperation of His Excellency, U. J. Le Verrier, Director of the Paris Observatory, and the respective Observers.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters	Weather.	Observer.
Alençon	.....	.....	29.90	759.4	51.8	11	86	SW	.....	.....	2	.....	10ks	.....	SW	0	0	Covered	Normal School.
Amiens	.....	.....	29.95	760.6	47.8	8.8	97	WSW	.....	.....	2	.....	5	.....	S	0.157	4.0	Cloudy.....	Normal School.
Avignon	.....	.....	30.17	766.4	60.3	15.7	73	SE	.....	.....	1	.....	5	W	SE	0	0	Cloudy.. ...	Normal School.
Bar-sur-Seine	.....	.....	29.96	760.7	60.6	15.9	56	WSW	.....	.....	2	2c	.....	.....	.....	0.008	0.2	Slightly cl'dy	C. Saillard.
Beaumette, (near Angers)	.....	.....	29.83	757.6	57.2	14.0	71	SSW	38.0	17.0	.....	.....	.....	.....	S	0.008	0.2	.....	Beaumette Observ'tory.
Beauvais	.....	.....	29.91	759.8	50.0	10	90	ESE	.....	.....	2	.....	8	.....	ESE	0.04	1.	Very cloudy	Normal School.
Besançon	.....	.....	30.05	763.3	58.1	14.5	59	S	.....	.....	4	.....	2	.....	SW	0	0	Slightly cl'dy	Normal School.
Bourg en Bresse	.....	.....	30.13	765.4	58.5	14.7	70	SE	.....	.....	6	.....	5cn	.....	N	0	0	C oudy.....	Normal School.
Bourges	.....	.....	29.88	759.0	59.4	15.2	66	SW	.....	.....	6	.....	2	.....	SW	0	0	Slightly cl'dy	Normal School.
Brest	.....	.....	29.56	750.7	51.6	10.9	93	SE	.....	.....	2	.....	10	.....	SE	0.020	0.50	.....	Naval Observatory.
Carcassonne	.....	.....	30.09	764.2	58.1	14.5	82	E	.....	.....	2	.....	5	.....	W	0.059	1.5	Cloudy.....	Normal School.
Caen	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Chartres	.....	.....	29.97	761.3	59.5	15.3	83	SSW	.....	.....	2	.....	1	.....	NNE	0.16	4.	.....	Normal School.
Châlons-sur-Marne	.....	.....	29.97	761.3	57.6	14.2	65	S	.....	.....	2	.....	2ck	.....	N	0.008	0.2	Slightly cl'dy	Normal School.
Clermont	.....	.....	29.97	761.3	64.0	17.8	34	S	.....	.....	3	.....	10	.....	S	0	0	Covered	Puy de Dome Obs'y.
Commercy	.....	.....	29.96	760.9	54.9	12.7	70	SSE	.....	.....	1	.....	0	.....	.....	0.008	0.2	Clear	Normal School.
Commune de Gréasque*	.....	.....	30.22	767.5	54.9	12.7	79	SE	.....	.....	2	.....	8	.....	SE	0	0	.....	M. Kina.
Grenoble	.....	.....	30.10	764.6	54.5	12.5	70	ENE	.....	.....	2	.....	2ck	.....	NE	0	0	Slightly cl'dy	Normal School.
La Roche-sur-Yon	.....	.....	29.85	758.2	58.6	14.8	66	NW	.....	.....	4	.....	2	.....	N	0	0	Slightly cl'dy	Normal School.
Le Mans	.....	.....	29.87	758.8	54.7	12.6	76	SW	.....	.....	3	.....	8	.....	SW	0	0	Very cloudy	Normal School.
Lons-Le-Saulnier	.....	.....	30.05	763.2	58.1	14.5	60	SW	.....	.....	1	.....	10	.....	.....	0	0	Covered	Normal School.
Lorient	.....	.....	29.67	753.5	53.6	12.0	76	S	.....	.....	4	.....	.....	.....	.....	0.528	13.4	Misty.	Naval Observatory.
Mâcon	.....	.....	30.13	765.2	58.6	14.8	87	S	.....	.....	2	.....	5	.....	S	0	0	Cloudy.....	Normal School.
Metz	.....	.....	30.07	763.7	51.8	11.0	80	SSE	.....	.....	2	.....	10	.....	.....	0	0	.....	M. Schuster.
Mirecourt	.....	.....	30.06	763.4	55.6	13.1	78	SSW	.....	.....	6	.....	10	.....	NW	0	0	Covered	Normal School.
Nismes	.....	.....	30.16	766.1	52.5	11.4	65	SE	.....	.....	1	.....	2	.....	NW	0	0	Slightly cl'dy	Normal School.
Orleans	.....	.....	29.91	759.6	59.4	15.2	62	S	.....	.....	1	.....	0	.....	.....	0	0	Clear	Normal School.
Paris, Observatory	.....	.....	29.90	759.4	54.7	12.6	78	SE	.....	.....	2	.....	5ck	.....	SW	0.011	0.27	Cloudy.....	National Observatory.
Parthenay	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Privas	.....	.....	30.20	767.0	57.2	14	.....	S	.....	.....	2	.....	10	.....	S	0	0	Covered	Normal School.
Rochefort, Observatory	.....	.....	29.96	760.9	61.3	16.3	60	SW	.....	.....	4	.....	5	.....	N	0	0	½ covered....	Naval Observatory.
Rouen	.....	.....	29.87	758.7	52.2	11.2	87	E	.....	.....	2	.....	10	.....	SE	0	0	Lightly cov.	Normal School.
Saint Lo	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Tarbes	28.90	734.0	29.97	761.2	58.1	14.5	85	W	.....	.....	2	.....	2	.....	E	0	0	Slightly cl'dy	Normal School.
Villefranche	.....	.....	30.09	764.2	60.8	16	71	SE	.....	.....	4	.....	8	.....	NW	0	0	Very cloudy	Normal School.
SUB-SERIES.																			
Fort de France, Martinique	.....	.....	30.00	762.0	78.8	26	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	L'Abbé Marchési.
Marseilles	.....	.....	30.14	765.6	59.7	15.4	69	ESE	.....	.....	2	.....	8	.....	.....	0	0	Very cloudy	Marseilles Observatory.
Mont-Louis	24.03	633.3	30.25	768.3	47.1	8.4	48	SSW	20.5	9.17	.....	.....	8	.....	SW	0	0	.....	—. Falguère.
Montsouris, Paris	.....	.....	29.89	759.2	56.5	13.6	76	ESE	.....	.....	1	.....	3	.....	SSW	0.016	0.4	.....	Montsouris Observatory
Perpignan	.....	.....	30.07	763.8	57.6	14.2	83	E	7.4	3.33	.....	.....	8	.....	W	0	0	.....	Dr. Fines.
Pic du Midi, (Summit,) H. P.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. Baylac.
Pic du Midi, (Plantade,) H. P.	22.57	573.2	.....	.....	35.6	2.0	.....	W	.....	.....	2	.....	8	.....	.....	0	0	Cloudy.....	General de Nansouty.
Saint Maur, (near Paris)	.....	.....	29.89	759.3	57.2	14.0	71	SSE	.....	.....	1	...	1	.....	.....	0.008	0.2	Clear.....	E. Renou.
Toulouse	.....	.....	30.11	764.7	57.9	14.4	82	SSE	.....	.....	1	.....	5	.....	.....	0	0	.....	Toulouse Observatory.
Tours	.....	.....	29.91	759.7	56.3	13.5	73	SW	.....	.....	1	.....	9	.....	W	0.012	0.3	.....	C. Marquet.
Versailles, (near Paris)	.....	.....	29.89	759.2	55.8	13.2	79	S	.....	.....	2	.....	5	.....	.....	0.017	0.42	Fair.....	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai)	.....	.....	30.41	772.4	39.4	4.1	85	E	10.3	4.58	.....	.....	0	.....	.....	0	0	.....	Marc Dechevrens, S. J.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—Generally, the originals give the wind-force by the scale 0 to 7; no distinction between upper and lower clouds, and, in the official series, the amount by the scale 0 to 4 the rain-fall as measured at 7, 8 or 9 a. m., local time; at Clermont, 9 a. m. of the following day; the weather in general terms as published. The elevation of Mont-Louis is 1,586.40 meters, or 5,204.8 feet; Clermont, 388 meters, or 1,272.9 feet; Commune de Gréasque, 322 meters, or 1,056.4 feet; Pic du Midi, (Summit,) 2,877 meters, or 9,439.1 feet; Pic du Midi, (Plantade,) 2,366 meters, or 7,762.6 feet; Tarbes, 308 meters, or 1,010 feet. In correcting the Mont-Louis barometric observations for altitude, the constant 185. millimeters has been added. *Bouches-du-Rhône

GERMAN SERIES.

Furnished by the coöperation of Professor Dr. G. Neumayer, Director of the German Naval Observatory, Hamburg.

Bamberg	.....	.....	30.10	764.4	43.7	6.5	88	WSW	.....	.....	3	.....	10	W	.....	0.020	0.5	Raining.....	Prof. T. Hoh
Berlin	.....	.....	30.14	765.6	45.1	7.3	75	NW	.....	.....	2	.....	10	.....	.....	0	0	.....	Prof. Arndt.
Breslau	.....	.....	30.14	765.5	48.4	9.1	75	WNW	.....	.....	2	.....	9	.....	.....	0	0	.....	Royal University Obs'y.
Carlsruhe	.....	.....	30.01	762.2	50.2	10.1	88	SSW	.....	.....	1	.....	10	.....	.....	0	0	.....	A. Senz.
Cassel	.....	.....	30.14	765.5	43.0	6.1	95	NNE	.....	.....	1	.....	7	SW	.....	0	0	.....	Dr. H. Möhl.
Crefeld	.....	.....	30.06	763.4	46.9	8.3	86	S	.....	.....	3	.....	9	.....	.....	0	0	Foggy	Director Lose.
Emden	.....	.....	30.21	767.2	41.2	5.1	69	NE	.....	.....	2	.....	5	.....	.....	0	0	.....	Prof. Prestel.
Frankfort on the Main	.....	.....	30.08	764.0	44.4	6.9	94	NE	.....	.....	1	.....	10	.....	.....	0.063	1.6	Raining.....	Physical Society.
Friedrichshafen	28.63	727.3	30.09	764.2	50.9	10.5	68	NNW	.....	.....	2	.....	10	.....	.....	0.102	2.6	Föhn.....	M. Wilhelm.
Hamburg	.....	.....	30.16	766.0	41.0	5.0	63	NW	.....	.....	1	.....	7k	NW	.....	0.047	1.2	Pleasant.....	Captain F. Hegemann.
Kiel	.....	.....	30.11	764.7	39.9	4.4	65	NW	.....	.....	1	.....	3	.....	.....	0.039	1.0	.....	Prof. G. Karsten.
Königsberg, (Prussia)	.....	.....	30.02	762.6	36.1	2.3	80	W	.....	.....	5	.....	9	.....	.....	0.071	1.8	.....	Prof. E. Luther.
Köslin	.....	.....	30.10	764.5	37.9	3.3	.....	W	.....	.....	1	.....	5	.....	.....	0	0	.....	H. Müller.
Leipsic	.....	.....	30.13	765.4	42.8	6.0	91	SSE	.....	.....	1	.....	10	SW	.....	0	0	.....	Prof. Bruhns.
Memel	.....	.....	29.95	760.6	33.8	1.0	92	N	.....	.....	2	.....	10ks	.....	.....	0.484	12.3	Light snow..	Reinbrecht & Skalweit.
Münster	.....	.....	30.08	763.9	49.6	9.8	82	NE	.....	.....	2	.....	10	.....	.....	0.106	2.7	Foggy.....	Prof. E. Heis.
Neufahrwasser	.....	.....	30.06	763.4	37.6	3.1	76	WNW	.....	.....	3	.....	10	.....	.....	0.020	0.5	.....	A Lothe.
Posen	.....	.....	30.11	764.7	46.6	8.1	81	NW	.....	.....	3	.....	6	.....	.....	0	0	.....	Dr. Magener.
Strassburg, (in Alsace)	.....	.....	30.05	763.3	51.1	10.6	84	Calm	.....	.....	0	.....	10	SW	.....	0.051	1.3	.....	Dr. Schur.
Stuttgart	.....	.....	30.02	762.4	54.3	12.4	68	W	.....	.....	1	.....	10	.....	.....	0.150	3.8	.....	Prof. Schoder.
Thorn	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Dr. Hasenbalg.
Treves, (Trier)	.....	.....	29.96	761.0	46.4	8.0	93	NE	.....	.....	1	.....	10	.....	.....	0.169	4.3	Foggy	Prof. Flesch.
Weissenburg, (Bavaria)	28.51	724.1	30.01	762.2	50.0	10.0	74	WNW	.....	.....	3	.....	9	W	.....	0	0	.....	Dr. von Bebber.
Wustrow, Naval School	.....	.....	30.08	763.9	36.3	2.4	81	W	.....	.....	4	.....	10	.....	.....	0.106	2.7	.....	E. F. Schütt.
GERMAN NAVAL SERIES.																			

NOTE.—The elevation of Friedrichshafen is 413.4 meters, or 1,356.9 feet; Weissenburg, 431 meters, or 1,414.0 ft. In the originals the distinction between the amount of upper and lower clouds is not made. It is not always certain that the remarks in the weather column refer to the moment of observation.

GREEK SERIES.

Furnished by the coöperation of Professor Dr. J. F. Julius Schmidt, Director of the Royal Observatory at Athens.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Athens			30.23	767.8	60.1	15.6		NW										Clear	

Note.—The originals give the barometer corrected, but not reduced to sea-level; occasionally the kind of clouds; the weather as published. They omit the humidity, wind-force, amount of cloudiness and rain-fall.

ITALIAN SERIES.

Furnished by the coöperation of His Excellency the Minister of Agriculture, Industry and Commerce, and the respective Observers.

Udine			30.23	767.8	47.7	8.7	87	Calm	0	0		10				0.020	0.5	Light rain ...	Prof. Giovanni Iodi
Stelvio	22.23	564.6	30.37	771.4	32.0	0.0		W			6	5		NE		0	0		Signora Ernesta Manfredi.
Valdobbia	22.24	565.0	30.29	769.4	29.8	— 1.2	85	W			4	10				0	0		Ab. Dom. Mongini.
Padua			30.23	767.7	47.1	8.4	96	NNW	0.7	0.3		10				0.047	1.2	Light rain...	Prof. Dott. Lorenzoni.
Vicenza			30.22	767.6	47.3	8.5	92	SE	1.3	0.6		10		E		0.016	0.4	Light rain...	Conte Alm. Da Schio.
Verona			30.21	767.3	48.6	9.2	84	W			1	10				0	0		Dott. B. Bertoncelli.
Bergamo	28.87	733.2	30.23	767.8	45.7	7.6	91	SW			1	10				0	0	Foggy	Prof Trionfini Carlo.
Domodossola			30.26	768.6	43.3	6.3	93	Calm			0	10				0	0		Prof. Giuseppe Cozzi.
Milan			30.26	768.5	47.5	8.6	96	E			1	10				0	0		Ab. Gio. Capelli.
Pavia			30.24	768.1	48.2	9.0	93	NE			1	10				0.051	1.3	Light rain..	Prof. Gio. Cantoni.
Moncalieri			30.27	768.8	44.6	7.0	99	NNW	2.5	1.1		10				0	0		Prof. P. F. Denza.
Mondovi	28.29	718.6	30.27	768.8	45.3	7.4	94	W			2	10		ENE		0	0		Prof. D. C. Bruno.
Porto Maurizio			30.25	768.4	56.7	13.7	81	ENE			2	10		SE		0	0		Prof. L. Vassallo.
Genoa			30.22	767.6	54.3	12.4	81	NE	0	0		10				0	0		Prof. G. M. Garibaldi.
Piacenza			30.26	768.5	48.2	9.0	93	NNE	4.3	1.9		10				0	0	Foggy	Dott. G. Manzi.
Parma			30.24	768.2	48.7	9.3	93	SE			4	10				0	0		Prof. P. Pigorini.
Florence			30.28	769.0	50.0	10.0	91	E			2	10				0	0		Cav. F. Meucci.
Leghorn			30.24	768.0	54.0	12.2	79	ENE	4.9	2.2		10		E		0	0		Prof. P. Monte.
Siena	29.02	737.0	30.25	768.3	48.7	9.3	96	ESE	0	0		10		S		0	0		Prof. L. Toscani.
Urbino	28.68	728.4	30.27	768.9	47.3	8.5	90	E			2	8				0	0		Prof. P. Serpieri.
Pesaro			30.28	769.1	43.7	6.5	98	N	0	0		10				0	0	Foggy	Prof. Luigi Guidi.
Ancona			30.25	768.3	46.0	7.8	94	W			2	10				0	0	Foggy	Prof. F. De— Bosis.
Grosseto			30.27	768.8	56.5	13.6	83	ESE			2	9		S		0	0		Avv. P. Ponticelli.
Rome			30.28	769.0	56.5	13.6	84	ENE	2.5	1.1		1				0	0		Prof's. P. Secchi & L. Respighi.
Naples, O. U.			30.29	769.4	59.4	15.2	71	WSW			1	4		NW		0	0		Prof. L. Palmieri.
Lecce			30.27	768.9	54.7	12.6	84	NNW	15.0	6.7		6		N		0	0		Prof. C. De—Giorgi.
Cosenza			30.31	769.9	61.2	16.2	55	SW	2.7	1.1		5							Prof. F. D. Conti.
Cagliari																			Prof. A. Pacinotti.
Riposto, (Sicily)			30.22	767.6	59.0	15.0	80	SE			2	1				0	0		Prof. F. Caffero.
Palermo			30.24	768.0	60.4	15.8	70	NE	1.5	0.6		4				0	0		Prof. G. Cacciatore.
Caltanissetta	28.29	718.6	30.28	769.0	59.2	15.1	49	W			1	3		SW		0	0		Prof. A. Pagani.
Siracusa			30.26	768.7	56.8	13.8	73	NE			1	5		WSW		0	0		Prof. V. Giuliano.
Sub-Series.																			
Naples, S. R.			30.33	770.4	56.1	13.4	75	NE	0	0		7		NE		0	0		Prof. F. Brioschi

Note.—The originals give the wind-force by the scale 0 to 4, or the velocity in kilometers per hour; generally, no distinction between upper and lower clouds; occasionally the weather by the Vienna symbols. The elevation of Stelvio is 2,543.0 meters, or 8,342.9 feet; Valdobbia, 2,548.0 meters or 8,359.3 feet; Bergamo, 379.6 meters, or 1,245.3 feet; Mondovi, 556 meters, or 1,824.2 feet; Siena, 348.5 meters, or 1,143.3 feet; Urbino, 451 meters, or 1,479.7 feet; Caltanissetta, 570.3 meters, or 1,871.0 feet.

Furnished by the coöperation of the Imperial University of Tokei, Japan.

JAPANESE SERIES.

Tokei			30.37	771.4	34	1.1		N	5	2.2		0				0	0		Prof. P. V. Veeder.

Note.—The originals give the amount of cloudiness by the scale 0 to 4 without distinguishing between upper and lower clouds. The rain-fall is measured at 7 a. m., local time.

By authority of the Secretary of Public Works.

MEXICAN SERIES.

Furnished by the coöperation of Senor Mariano Barcena, Director of the Central Meteorological Observatory in the City of Mexico.

Mexico																		Mariano Barcena. Vicente Reyes. Miguel Perez. (Engineers in charge.)	

Note.—The elevation of Mexico is 2,290 meters, or 7,512.9 feet. The rain-fall is measured at 6 a. m., local time.

NETHERLANDS' SERIES.

Furnished by the coöperation of Professor Buys Ballot, Director of the Royal Meteorological Institute of the Netherlands at Utrecht.

Flushing			30.05	763.2	45.0	7.2		ENE			4					0.020	0.5		
Groningen			30.09	764.3	41.9	5.5		E			3					0.004	0.1		
Helder			30.12	765.0	43.0	6.1		ENE			4					0	0		
Utrecht			30.04	763.1	45.3	7.4	93	ENE			3		10			0	0	Dull	

Note.—The originals give the wind-pressure in kilograms per sq uare meter; for Utrecht, they give the weather as published, from which the amount of cloudiness is taken by the scale 0 to 4, without distinguishing between upper and lower clouds. It is assumed that the barometer readings have been reduced to sea-level.

NORWEGIAN SERIES.

Furnished by the coöperation of Professor H. Mohn, Director of the Royal Norwegian Meteorological Institute at Christiania.

Bergen			30.15	765.9	32.4	0.2	89	Calm	0	0		10				0.016	0.4		
Brönö			30.08	764.0	30.6	— 0.8	77	S	8.9	4		5							
Christiania			30.24	768.2	18.7	— 7.4	72	ENE	2.0	0.9		3				0	0		
Tromsö			29.69	754.2	25.5	— 3.6	65	SW	13.4	6		5				0.172	4.4		

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols. The cloudiness and weather at Bergen refer to 2h., p. m., local time, instead of 1h., 4 min.

PORTUGUESE SERIES.

Furnished by the coöperation of J. C. de Brito Capello, Director of the Meteorological Observatory of the Infante Don Luiz at Lisbon.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Angra, (Azores)	.....	.....	30.40	772.2	51.8	11.0	80	NE	8.1	3.6	.....	.....	6	.....	.....	Inap.	Inap.	Raining.....	Dr. J. A. Sampaio.
Campo Major	.....	.....	30.20	767.1	58.1	14.5	82	SE	1.8	0.6	.....	.....	9	SSW	.....	0	0	.....	Dr. A. M. R. dos Santos.
Funchal, (Madeira)	.....	.....	30.21	767.2	63.3	17.4	63	SSE	6.3	2.8	.....	.....	3	.....	.....	0	0	.....	Capt. D. A. de Cunha.
Lisbon	.....	.....	30.20	767.1	58.8	14.9	85	S	1.8	0.6	.....	.....	9	.....	.....	0.122	3.1	.....	The Observatory.
Ponta Delgada, (Azores)	.....	.....	30.38	771.6	56.8	13.8	62	NNE	4.9	2.2	.....	.....	4	.....	.....	0.110	2.8	.....	

Note.—The originals give the wind-velocity in kilometers per hour; occasionally, the weather by the Vienna symbols; the amount of cloudiness without distinguishing between upper and lower clouds; the barometer corrected but not reduced to sea-level. The rain-fall at Lisbon is measured at noon, instead of 0 h. 6 m., p. m.

RUSSIAN SERIES.

Furnished by the coöperation of Professor H. Wild, Director of the Imperial Central Physical Observatory of Russia, at St. Petersburg.

Warsaw	.....	.....	30.08	763.9	44.2	6.8	85	WSW	11	5	.....	.....	10	.....	.....	.....	.....	.....	Astronomical Obs.
Wilna	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Astronomical Obs.
Dorpat	.....	.....	29.87	758.6	24.6	— 4.1	70	NW	13	6	.....	.....	0	.....	.....	.....	.....	.....	Physical Cabinet.
St. Petersburg	.....	.....	29.64	752.8	24.6	— 4.1	83	NNW	16	7	.....	.....	10	.....	.....	.....	.....	.....	Central Physical Obs.
Kuopio	.....	.....	29.80	757.0	5.4	—14.8	100	NW	18	8	.....	.....	0	.....	.....	.....	.....	.....	Ch. Forsten.
Kieff	.....	.....	30.07	763.7	37.2	2.9	86	WSW	2	1	.....	.....	5	.....	.....	.....	.....	.....	Physical Cabinet.
Nikolaiev	.....	.....	30.22	767.6	35.4	1.9	95	Calm	0	0	.....	.....	10	.....	.....	.....	.....	Raining.....	Kurdakof.
Kertch	.....	.....	30.28	769.0	40.3	4.6	89	SSW	7	3	.....	.....	10	.....	.....	.....	.....	.....	Lagorio.
Moscow	.....	.....	29.56	750.9	34.9	1.6	91	S	18	8	.....	.....	10	.....	.....	.....	.....	.....	Meteorological Obs.
Lugan	.....	.....	30.13	765.4	32.9	0.5	90	SSW	13	6	.....	.....	10	.....	.....	.....	.....	.....	Meteorological Obs.
Archangel	.....	.....	29.34	745.1	19.0	— 7.2	90	N	22	10	.....	.....	10	.....	.....	.....	.....	.....	Ogorodnikof.
Tiflis	28.87	733.4	30.34	770.6	44.4	6.9	56	SSW	4	2	.....	.....	0	.....	.....	.....	.....	.....	Physical Observatory.
Astrakhan	.....	.....	30.34	770.5	39.9	4.4	79	S	4	2	.....	.....	9	.....	.....	.....	.....	.....	Sebastianof.
Kasan	.....	.....	30.26	768.5	33.6	0.9	96	SSW	.....	.....	.....	.....	10	.....	.....	.....	.....	.....	Physical Cabinet.
Orenburg	.....	.....	30.80	782.2	— 4.5	—20.3	67	E	13	6	.....	.....	3	.....	.....	.....	.....	.....	Tschernischef.
Ekaterinburg	29.06	738.2	30.07	763.6	24.6	— 4.1	91	SSW	13	6	.....	.....	10	.....	.....	.....	.....	.....	Meteorological Obs.
Nukuss	.....	.....	30.44	773.1	33.1	0.6	44	NNW	2	1	.....	.....	0	.....	.....	.....	.....	.....	
Kasaly	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Bobrof.
Tashkend	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Michelson.
Barnaul	.....	.....	30.77	781.5	— 7.1	—21.7	81	NE	4	2	.....	.....	0	.....	.....	.....	.....	.....	Meteorological Obs.
Yeniseisk	.....	.....	30.80	782.3	—29.7	—34.3	77	Calm	0	0	.....	.....	0	.....	.....	.....	.....	.....	Marks.
Irkutsk	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Usolzef.
Peking, (China)	.....	.....	30.35	770.9	25.3	— 3.7	80	Calm	0	0	.....	.....	3	.....	.....	.....	.....	.....	Physical Observatory.
Nertchinsk	28.01	711.4	30.47	773.8	—29.7	—34.3	95	Calm	0	0	.....	.....	0	.....	.....	.....	.....	.....	Meteorological Obs.
Vladivostock	.....	.....	30.39	772.0	17.2	— 8.2	79	NW	11	5	.....	.....	0	.....	.....	.....	.....	.....	
Nikolaievsk, on the Amoor	.....	.....	.....	.....	—11.2	—24.0	.....	Calm	0	0	.....	.....	0	.....	.....	.....	.....	.....	

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols; they omit the rain-fall. The elevation of Tiflis is 409 meters, or 1,341.8 feet; Ekaterinburg, 306.4? m., or 1,005.2? ft.; Tashkend, 494.2? m., or 1,621.3? ft.; Irkutsk, 392 m., or 1,286 ft.; Nertchinsk, 592.0? m., or 1,942.2? ft.

SPANISH SERIES.

Furnished by the cooperation of Antonio Aguilar, Director of the Royal Observatory at Madrid, and of Don Cecilio Pujazon, Captain R. N. Director of the Naval Observatory at San Fernando.

Madrid	.....	.....	30.26	768.6	53.1	11.7	76	SW	14.2	6.33	.....	0	6	.....	.....	0	0	Cloudy.....	Royal Observatory.
San Fernando	.....	.....	30.25	768.4	66.7	19.3	66	SSE	7.2	3.2	.....	1	6	SW	SSE	0.004	0.1	.....	Naval Observatory.
	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

Note.—The originals give the weather in general terms, as published; rain-fall for San Fernando from preceding to following midnight; wind-velocity for Madrid in kilometers per hour.

SWEDISH SERIES.

Furnished by the cooperation of Professor R. Rubenson, Director of the Royal Swedish Meteorological Institute, at Stockholm, and of Dr. H. H. Hildebrandsson, Chief of the Meteorological Division of the Upsala Observatory.

Haparanda	.....	.....	29.88	758.9	3.9	—15.6	81	Calm	.....	.....	0	.....	0	.....	.....	0.118	3.0	.....	
Umea	.....	.....	30.06	763.5	9.7	—12.4	92	NW	.....	.....	2	.....	0	.....	.....	0	0	.....	
Hernosand	.....	.....	30.12	765.0	12.9	—10.6	93	Calm	.....	.....	0	.....	0	.....	.....	0	0	.....	
Stockholm	.....	.....	30.10	764.6	18.7	— 7.4	89	NNW	.....	.....	2	.....	0	.....	.....	0	0	.....	
Wisby	.....	.....	30.10	764.6	29.1	— 1.6	80	ENE	.....	.....	4	.....	7	.....	.....	0.181	4.6	.....	
Sub-Series.																			
Upsala	.....	.....	30.14	765.5	14.2	— 9.9	82	NNW	6.7	3.0	.....	.....	0	.....	.....	0.001	0.03	.....	Dr. Hildebrandsson.
	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

Note.—The originals give the wind-force by the scale 0 to 6, and Upsala also velocity in meters per second; occasionally, the weather by the Vienna symbols, or in general terms; no distinction between the amount of upper and lower clouds. The rain-fall is measured at 8 a. m., local time.

SWISS SERIES.

Furnished by the coöperation of Professor R. Wolf, Director of the Observatory at Zurich, and of Professor E. Plantamour, Director of the Observatory at Geneva.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	OBSERVER.
Geneva	28.68	728.5	30.13	765.3	46.8	8.2	94	NNE			1		8			0	0	Vapory	The Observatory.
Zurich	28.41	721.6	30.06	763.4	52.0	11.1	71	W			2		6			0	0	Cloudy	The Observatory.

Note.—For Geneva the corresponding departures from the normal values are: Barometer, +0.8 mm; Thermometer, +6.9 cent.; Relative Humidity, +14 per cent.

Note.—The rain-fall is measured at Zurich at 7 a. m. on the following day. The originals give the barometer corrected but not reduced to sea-level; the wind-force by the scale 0 to 4 for Zurich; the amount of cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The elevation of Geneva is 408 meters, or 1,339 feet, and that of Zurich 470 meters, or 1,542 feet.

TURKISH SERIES.

Furnished by the coöperation of A. Coumbary, Effendi, Director of the Central Observatory at Constantinople, and of Professor C. V. A. Van Dyck, Superintendent of the Lee Observatory at Beirut.

Constantinople			30.26	768.7	48.4	9.1	67	NNE	7	3.0			7		N	0	0		
Fao, (Persian Gulf)																			
Salonica			30.32	770.1	57.7	14.3		NE			1		0						
Valona			30.24	768.1	54.7	12.6		W			2		2						
Varna			30.24	768.0	41.0	5.0		E			1		10					Foggy	
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y			30.05	763.2	64.9	18.3	59	SW			1		10cs,n		SW	0	.0	Overcast	Prof. C. V. A. Van Dyck

Note.—The originals give the wind-force by the scale 0 to 7, (except Beirut, by the scale 0 to 12, and Constantinople velocity in meters per second;) the weather in general terms as published; no distinction between upper and lower clouds, and, except Constantinople and Beirut, the amount by the scale 0 to 4. It is assumed that the barometer is reduced to sea-level.

CANADIAN SERIES.

Furnished by the cooperation of Professor G. T. Kingston, Director of the Magnetic Observatory at Toronto, and Superintendent of the Meteorological Office of the Dominion of Canada, and the respective Observers. Those marked with a star (*) are also telegraphed daily to the office of the Chief Signal Officer, U. S. Army.

Bathurst, N. B			29.53	750.0	—27.5	—33.1	46	Calm	0	0			0			0	0		Hon. J. Ferguson.
Brockville, Ontario			30.15	765.8	11	—11.7		S	5	2.2			10s		S	0	0	Cloudy	W. R. Bigg.
*Chatham, N. B			30.56	776.2	—22	—30.0	100	Calm	0	0		5ck	Haze			0	0	Fair	G. A. Blair.
Charlottetown, P. E. Island			30.53	775.4	— 2	—18.9	87	NW	8	3.6		5c	0			0	0	Fair	H. J. Cundall, C. E.
Cornwall, Ontario			30.19	766.8	— 1.8	—18.8	100	W			1		10s			0	0	Threatening	James Smith, M. A.
Dalhousie, N. B			30.41	772.4				W			1					0	0	Clear	H. A. Johnson.
Esquimault, B. C			29.76	755.9	45.3	7.4	84	SW				3k	0			0	0	Clear	W. H. Bevis.
Fredericton, N. B			30.58	776.7	—18.6	—28.1	100	Calm	0	0		3c	0			0.060	1.52	Clear	Prof. Harrison.
*Fort Garry, Manitoba			29.90	759.4	—26	—32.2	90	S	8	3.6		0	0			0	0	Clear	James Stewart.
Goderich, Ontario			30.02	762.5	14.8	— 9.6	87	SW			2		10n			0.05	1.3	Dull	H. J. Strang, M. A.
Granton, Ontario	28.83	732.3	30.02	762.5	15.0	— 9.4		S			1		10n			0	0	Cloudy	James Grant.
*Halifax, N. S			30.52	775.2	1	—17.2	98	NE	18	8.0		2cs	2ks	N		0	0	Fair	F. Allison, M. A.
Hamilton, Ontario			30.10	764.5	18.9	— 7.3	58	W			1		10n			0	0	Overcast	G. Dickson.
Heart's Content, N. F			30.36	771.1	13	—10.6	62	NW			4	1ck	0			0.18	4.6	Fine	E. Weedon.
*Kingston, Ontario			30.19	766.8	14	—10.0	91	S	8	3.6			10s		S	0.02	0.5	Cloudy	S. Woods, M. A
*Montreal, Quebec			30.25	768.3	— 9	—22.8	82	SE	12	5.4			10n			0	0	Cloudy	C. H. McLeod, C. E.
*Ottawa, Ontario			30.16	766.1	— 4	—20.0	90	E	4	1.8			10n		E	Inap.	Inap.	Light snow	J. B. Haney.
*Parry Sound, Ontario			29.94	760.5	15	— 9.4	91	S	20	8.9			10n		S	0.27	6.9	Cloudy	Rev. R. Mosley.
Port Dover, Ontario			30.07	763.8	17	— 8.3	82	SW	14	6.3			Haze			0	0	Cloudy	H. Morgan.
Port Hastings, N. S			30.47	773.9	9	—12.8		NW	3	1.3						0	0	Fine	Peter Grant.
Port Stanley, Ontario			30.06	763.5	19	— 7.2	81	SW	12	5.4			10n		SW	Inap	Inap.	Cloudy	M. Payne.
*Quebec, Quebec			30.37	771.4	— 7	—21.7	59	Calm	0	0			10n			0	0	Cloudy	Capt. Ashe, R. N.
*Rockliffe, Ontario			30.01	762.2	— 1	—18.3	97	E	12	5.4			10s		SW	Inap.	Inap.	Cloudy	
St. John, N. B			30.56	776.2	— 5	—20.6	66	N	3	1.3		10cs	0			0	0	Cloudy	G. Murdoch, C. E.
*Saugeen, Ontario			29.93	760.2	15	— 9.4	65	SW	7	3.1			10n			0.02	0.5	Cloudy	K. Stewart.
Stayner, Ontario			29.99	761.7	12	—11.1	82	SE	1	0.4			10n		SE	0	0	Cloudy	R. J. Cole.
Stratford, Ontario	28.66	728.0	30.05	763.3	12.6	—10.8	86	SW	9	4.0			10s			0	0	Cloudy	C. J. MacGregor, M. A.
*Sydney, C. B			30.52	775.2	7	—13.9	84	NW	6	2.7		10cs	0			0	0	Cloudy	T. C. Hill.
*Toronto, Ontario			30.06	763.5	20	— 6.7	84	SW	15	6.7			10n		SW	0	0	Cloudy	Magnetic Observatory.
Woodstock, Ontario			30.06	763.5	15.6	— 9.1	98	SW	15	6.7			10s			0.02	0.5	Cloudy	J. Montgomery.
Sub-Series.																			
St. Johns, Newfoundland			30.39	771.9	15.0	— 9.4		NW				0	5s			0.03	0.8	Fair	John Delany.

Note.—The originals for Brockville, Charlottetown, Port Dover, Port Stanley, St. Johns, N. F., Stayner and those telegraphed, give the amount of cloudiness by the scale 0 to 4. The elevation of Granton is 1,015 feet, or 309.4 m.; Stratford, 1,182 feet, or 360.3 m.

UNITED STATES SERIES.

Furnished by the coöperation of Bvt. Brig. Gen. Albert J. Myer, Chief Signal Officer, U. S. Army.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Met ers per second.	Wind. Force. 0—10.	Clouds. Amount Upper. 0—10.	Clouds. Amount Low'r. 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Albany, N. Y.	.....	.....	30.36	771.1	3	—16.1	72	NW	1	0.4	.....	0	2s	.....	.....	0	0	Clear	
Alpena, Mich.	.....	.....	29.87	758.7	11	—11.7	79	SW	12	5.4	.....	.....	10s	.....	SW	Inap.	Inap.	Cloudy	
Atlantic City, N. J.	.....	.....	30.27	768.8	25	— 3.9	87	NW	4	1.8	.....	.....	10s	.....	.....	0	0	Cloudy	
Augusta, Ga.	.....	.....	30.35	770.9	26	— 3.3	88	NW	4	1.8	.....	2cs	0	SW	.....	0	0	Fair	
Baltimore, Md.	.....	.....	30.34	770.6	17	— 8.3	67	Calm	0	0	.....	Haze	2s	.....	.....	0	0	Fair	
Barnegat, N. J.	.....	.....	30.28	769.1	32	0.0	79	E	12	5.4	.....	.....	10s	.....	E	0	0	Cloudy	
Bismarck, Dakota	27.96	710.2	29.80	756.9	—11	—11.7	75	N	1	0.4	.....	.....	10s	.....	.....	0	0	Cloudy	
Boston, Mass.	.....	.....	30.42	772.7	7	—13.9	77	NW	7	3.1	.....	10cs	Sm'c	.....	.....	0	0	Cloudy	
Breckenridge, Minn.	.....	.....	29.99	761.7	—19	—28.3	66	SW	8	3.6	.....	0	0	.....	.....	0	0	Clear	
Buffalo, N. Y.	.....	.....	30.06	763.5	17.0	— 8.3	83	S	12	5.4	.....	.....	10s	.....	SW	Inap.	Inap.	Cloudy	
Burlington, Vt.	.....	.....	30.31	769.9	13	—10.6	81	S	8	3.6	.....	0	8s	.....	.....	0	0	Cloudy	
Cairo, Ill.	.....	.....	30.05	763.3	27	— 2.8	88	S	7	3.1	.....	.....	10s	.....	.....	0.18	4.6	Cloudy	
Cape Hatteras, N. C.	.....	.....	30.14	765.5	35	1.7	90	N	18	8.0	.....	.....	10s	.....	N	0.29	7.4	Cloudy	
Cape Henry, Va.	.....	.....	30.25	768.3	29	— 1.7	89	NW	22	9.8	.....	.....	10s	.....	.....	0	0	Cloudy	
Cape Lookout, N. C.	.....	.....	30.22	767.6	30	— 1.1	89	NE	8	3.6	.....	.....	10s	.....	NE	0.21	5.3	Cloudy	
Cape May, N. J.	.....	.....	30.27	768.8	21	— 6.1	58	N	18	8.0	.....	0	2s	.....	NW	0	0	Fair	
Charleston, S. C.	.....	.....	30.27	768.8	32	0.0	69	NW	7	3.1	.....	.....	10s	.....	.....	0	0	Cloudy	
Cheyenne, Wyoming	23.67	601.2	29.61	752.1	38	3.3	56	W	12	5.4	.....	0	2s	.....	.....	0.06	1.5	Fair	
Chicago, Ill.	.....	.....	29.92	760.0	24	— 4.4	84	SW	10	4.5	.....	.....	10s	.....	.....	Inap.	Inap.	Cloudy	
Cincinnati, Ohio	.....	.....	30.01	762.2	24	— 4.4	87	SW	8	3.6	.....	.....	10n	.....	.....	0.03	0.8	Heavy snow	
Cleveland, Ohio	.....	.....	30.09	764.3	12	—11.1	80	SE	9	4.0	.....	.....	10n	.....	.....	Inap.	Inap.	Light snow	
Corsicana, Tex.	.....	.....	30.06	763.5	36	2.2	80	S	5	2.2	.....	5cs	Haze	.....	.....	0	0	Fair	
Davenport, Iowa	.....	.....	29.97	761.2	22	— 5.6	85	SW	1	0.4	.....	.....	10s	.....	.....	0.02	0.5	Cloudy	
Denison, Tex.	.....	.....	30.05	763.3	35	1.7	79	S	7	3.1	.....	0	0	.....	.....	0	0	Clear	
Denver, Col.	24.51	622.5	29.73	755.1	26	— 3.3	88	SE	5	2.2	.....	0	2s	.....	.....	Inap.	Inap.	Clear	
Detroit, Mich.	.....	.....	29.98	761.5	16	— 8.9	83	SW	5	2.2	.....	.....	10s	.....	.....	0	0	Cloudy	
Dodge City, Kan.	27.36	694.9	29.75	755.6	28	— 2.2	88	SW	4	1.8	.....	.....	10s	.....	S	Inap.	Inap.	Cloudy	
Dubuque, Iowa.	.....	.....	29.94	760.5	18	— 7.8	84	NW	1	0.4	.....	.....	10s	.....	.....	0.08	2.0	Cloudy	
Duluth, Minn.	.....	.....	29.91	759.7	— 1	—18.3	84	SW	8	3.6	.....	0	0	.....	.....	0	0	Clear	
Eastport, Me.	.....	.....	30.50	774.7	2	—16.7	86	NE	8	3.6	.....	2c	8s	SW	.....	0	0	Fair	
Erie, Pa.	.....	.....	30.06	763.5	19	— 7.2	84	S	20	8.9	.....	2ck	Haze	SW	.....	0	0	Hazy	
Escanaba, Mich.	.....	.....	29.87	758.7	5.5	—14.7	75	SW	4	1.8	.....	.....	10s	.....	.....	0.12	3.0	Cloudy	
Fort Gibson, Indian Ter.	.....	.....	30.00	762.0	32	0.0	69	NW	4	1.8	.....	5c	0	NW	.....	0	0	Fair	
Ft. St. Michael, Alaska	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Fort Sill, Indian Ter.	28.76	730.5	29.90	759.4	38	3.3	45	N	10	4.5	.....	0	0	.....	.....	0	0	Clear	
Fort Sully, Dakota	28.09	713.5	29.86	758.4	12	—11.1	80	SE	6	2.7	.....	.....	10s	.....	.....	0.03	0.8	Cloudy	
Florence, Arizona	28.44	722.4	29.99	761.7	45	7.2	.....	SE	.....	.....	.....	5c	0	E	.....	0	0	Fair	
Galveston, Tex.	.....	.....	30.13	765.3	52	11.1	93	S	7	3.1	.....	0	8ks	.....	SW	0	0	Cloudy	
Grand Haven, Mich.	.....	.....	29.87	758.7	24	— 4.4	87	SE	14	6.3	.....	.....	10n	.....	.....	0.09	2.3	Light snow	
Indianapolis, Ind.	.....	.....	30.01	762.2	20	— 6.7	85	S	1	0.4	.....	.....	10n	.....	.....	0.03	0.8	Light snow	
Indianola, Tex.	.....	.....	30.15	765.8	45	7.2	92	Calm	0	0	.....	0	2s	.....	.....	0	0	Fair	
Jacksonville, Fla.	.....	.....	30.26	768.6	41	5.0	83	Calm	0	0	.....	.....	10s	.....	.....	0	0	Cloudy	
Keokuk, Iowa.	.....	.....	29.91	759.7	25	— 3.9	88	NW	4	1.8	.....	.....	10s	.....	NW	0.12	3.0	Cloudy	
Key West, Fla.	.....	.....	30.19	766.8	60	15.6	94	NE	12	5.4	.....	.....	10ks	.....	.....	Inap.	Inap.	Cloudy	
Kittyhawk, N. C.	.....	.....	30.23	767.8	32	0.0	100	N	22	9.8	.....	.....	10s	.....	N	0.09	2.3	Cloudy	
Knoxville, Tenn.	.....	.....	30.28	769.1	10	—12.2	79	Calm	0	0	.....	10cs	0	.....	.....	0	0	Cloudy	
La Crosse, Wis.	.....	.....	29.95	760.7	5	—14.4	76	SW	4	1.8	.....	0	0	.....	.....	0.13	3.3	Clear	
Leavenworth, Kan.	.....	.....	30.06	763.5	19	— 7.2	85	NW	4	1.8	.....	0	0	.....	.....	0.15	3.8	Clear	
Louisville, Ky.	.....	.....	30.00	762.0	23	— 5.0	73	S	8	3.6	.....	.....	10n	.....	.....	0.01	0.3	Light snow	
Lynchburg, Va.	.....	.....	30.33	770.4	11	—11.7	79	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Malone, N. Y.	.....	.....	30.14	765.5	21	— 6.1	85	S	18	8.0	.....	.....	10s	.....	S	0	0	Cloudy	
Marquette, Mich.	.....	.....	29.81	757.2	12	—11.1	61	SW	4	1.8	.....	.....	10s	.....	.....	0	0	Cloudy	
Memphis, Tenn.	.....	.....	30.12	765.0	33	0.6	69	S	6	2.7	.....	.....	10s	.....	SW	0	0	Cloudy	
Milwaukee, Wis.	.....	.....	29.92	760.0	17	— 8.3	83	W	10	4.5	.....	.....	10n	.....	.....	0.16	4.1	Light snow	
Mobile, Ala.	.....	.....	30.28	769.1	25	— 3.2	77	NE	2	0.9	.....	Haz	0	.....	.....	0	0	Clear	
Montgomery, Ala.	.....	.....	30.33	770.4	25.0	— 1.9	77	SE	1	0.4	.....	0	Sm'c	.....	.....	0	0	Clear	
Morgantown, W. Va.	29.03	737.3	30.19	766.8	5.0	—13.1	78	Calm	0	0	.....	10c,cs	Sm'c	SW	.....	0	0	Cloudy	
Mt. Washington, N. H.	23.56	598.4	29.92	760.0	— 3	—19.4	66	S	40	17.9	.....	2c	5s	S	S	0	0	Fair	
Nashville, Tenn.	.....	.....	30.12	765.0	27	— 2.8	88	S	2	0.9	.....	.....	10n	.....	.....	0.05	1.3	Light snow	
New Haven, Conn.	.....	.....	30.36	771.1	10	—12.2	61	NE	15	6.7	.....	Haz.	0	.....	.....	0	0	Clear	
New London, Conn.	.....	.....	30.38	771.6	14	—10.0	63	N	10	4.5	.....	2c	2s	W	.....	0	0	Fair	
New Orleans, La.	.....	.....	30.21	767.3	36	2.2	66	SE	8	3.6	.....	0	0	.....	.....	0	0	Clear	
Newport, R. I.	.....	.....	30.38	771.6	15	— 9.4	83	N	8	3.6	.....	.....	10s	.....	SE	0	0	Cloudy	
New York, N. Y.	.....	.....	30.33	770.4	19	— 7.2	69	NE	14	6.3	.....	.....	10s, fc	.....	.....	0	0	Cloudy	
Norfolk, Va.	.....	.....	30.28	769.1	24	— 4.4	86	N	7	3.1	.....	.....	10s	.....	.....	0	0	Cloudy	
North Platte, Neb.	26.83	681.5	29.44	747.8	30	— 1.1	100	SE	24	10.7	.....	.....	10s	.....	.....	Inap.	Inap.	Threatening	
Omaha, Neb.	28.85	732.8	30.02	762.5	11	—11.7	70	Calm	0	0	.....	5cs	0	NW	.....	0.19	4.8	Fair	
Oswego, N. Y.	.....	.....	30.18	766.6	18.0	— 7.6	67	SE	12	5.4	.....	.....	10s	.....	SW	Inap.	Inap.	Cloudy	
Pembina, Dakota	.....	.....	29.87	758.7	—23	—30.6	58	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Philadelphia, Pa.	.....	.....	30.35	770.9	16	— 8.9	74	NE	10	4.5	.....	1cs	Haz.	.....	.....	0	0	Clear	
Pike's Peak, Col.	17.50	444.5	29.71	754.6	11	—11.7	90	W	26	11.6	.....	.....	10s	.....	NW	0	0	Cloudy	
Pittsburgh, Pa.	.....	.....	30.16	766.1	10	—12.2	89	E	1	0.4	.....	.....	Fog	.....	.....	0	0	Foggy	
Port Huron, Mich.	.....	.....	29.99	761.7	14	—10.0	91	S	9	4.0	.....	.....	10s	.....	.....	Inap.	Inap.	Threatening	
Portland, Me.	.....	.....	30.44	773.2	8	—13.3	66	Calm	0	0	.....	.....	10n	.....	.....	Inap.	Inap.	Light snow	
Portland, Oregon	.....	.....	29.96	761.0	49	9.4	64	NW	8	3.6	.....	0	5s	.....	NW	0.02	0.5	Fair	
Punta Rassa, Fla.	.....	.....	30.21	767.3	58.5	14.7	93	NE	8	3.6	.....	2cs	5s	SW	.....	0	0	Fair	
Rochester, N. Y.	.....	.....	30.11	764.8	16	— 8.9	66	SW	11	4.9	.....	.....	10s	.....	SW	Inap.	Inap.	Cloudy	
Salt Lake City, Utah	25.45	646.4	29.81	757.2	42	5.6	83	SE	4	1.8	.....	.....	10n	.....	.....	0.03	0.8	Light rain	
Sandy Hook, N. J.	.....	.....	30.28	769.1	22	— 5.6	86	NE	15	6.7	.....	.....	10s	.....	.....	0	0	Cloudy	
San Diego, Cal.	.....	.....	30.04	763.0	54	12.2	93	SE	4	1.8	.....	.....	10s	.....	SE	0	0	Cloudy	
San Francisco, Cal.	.....	.....	30.00	762.0	51	10.6	78	NW	2	0.9	.....	0	0	.....	.....	0	0	Clear	
Santa Fé, N. M.	23.20	589.3	29.74	755.4	28	— 2.2	57	N	2	0.9	.....	0	0	.....	.....	0	0	Clear	
Savannah, Ga.	.....	.....	30.29	769.4	31	— 0.6	89	NE	6	2.7	.....	8ck	0	SW	.....	0	0	Fair	
Shreveport, La.	.....	.....	30.18	766.6	36	2.2	70	SE	3	1.3	.....	Haze	0	.....	.....	0	0	Clear	
Smithville, N. C.	.....	.....	30.23	767.8	29	— 1.7	89	N	6	2.7	.....	.....	10ks	.....	SW	0	0	Cloudy	
Springfield, Mass.	.....	.....	30.42	772.7	8	—13.3	64	N	1	0.4	.....	8c	0	W	.....	0	0	Fair	
St. Louis, Mo.	.....	.....	30.00	762.0	25	— 3.9	87	S	8	3.6	.....	0	0	.....	.....	0.10	2.5	Clear	
St. Marks, Fla.	.....	.....	30.29	769.4	27	— 2.8	77	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
St. Paul, Minn.	.....	.....	29.97	761.2	—10	—23.3	76	SW	8	3.6	.....	0	0	.....	.....	Inap.	Inap.	Clear	
St. Paul's Island, Alaska	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Thatcher's Island, Mass.	.....	.....	30.42	772.7	19	— 7.2	69	N	8	3.6	.....	2c	8s	W	N	0	0	Cloudy	
Toledo, Ohio	.....	.....	29.98	761.5	22	— 5.6	85	S	8	3.6	.....	.....	10n	.....	S	0.01	0.3	Light snow	
Tucson, Arizona	27.59	700.8	30.14	765.5	35	1.7	.....	S	.....	.....	.....	10c	0	N	.....	0	0	Cloudy	
Tybee Island, Ga.	.....	.....	30.20	768.0	32	0.0	89	N	8	3.6	.....	5ck	0	NW	.....	0	0	Fair	
Vicksburg, Miss.	.....	.....	30.23	767.8	34	1.2	90	SE	5	2.2	.....	0	10ks	.....	W	0	0	Cloudy	
Virginia City, M. T.	23.83	605.3	29.31	744.5	40	4.4	66	SW	16	7.2	.....	.....	8s	.....	W	0	0	Cloudy	
Washington, D. C.	.....	.....	30.36	770.9	14	—10.0	83	N	4	1.8	.....	.....	10ks am	.....	SW	0	0	Cloudy	
Wilmington, N. C.	.....	.....	30.23	767.8	29	— 1.7	67	NW	6	2.7	.....	8cs	0	SW	.....	0	0	Cloudy	

UNITED STATES SERIES.—CONTINUED.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. U. 'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Wood's Holl, Mass.	.....	.....	30.38	771.6	18	— 7.8	68	N	6	2.7	.....	0	5s	.....	SW	0	0	Fair	
Yankton, Dakota	25.64	727.4	30.07	763.8	0	—17.8	69	S	1	0.4	.....	0	0	.....	.....	0.01	0.3	Clear	
Yuma, Arizona	.....	.....	29.98	761.5	53	11.7	.....	E	.....	.....	.....	0	2s	.....	NE	0	0	Fair	
Sub-Series.																			
Kingston, Jamaica, W. I.	.....	.....	30.29	769.4	78	25.6	82	E	10	4.5	.....	8c	2s	E	.....	0.05	1.3	.....	James Gall.
Navassa, W. I.	.....	.....	.....	.....	79	26.1	.....	E	.....	3	.....	.....	.....	.....	.....	0	0	Cloudy	F. M. Everett.
Clifton, Ja., W. I.	27 29	693.2	30.08	764.0	67	19.4	80	SE	1.0	0.4	.....	5c	0	SE	.....	1.35	34.3	Fine	C. Partridge.
Paramaribo, D. Guiana, S.A	.....	.....	30.08	764.0	82	27.8	83	E	.....	3	.....	5k	6ks	E	.....	0.160	4.00	Fair	C. J. Hering.
Batavia, Dutch Guiana, S.A.	30.08	764.0	.....	.....	75 2	24	.....	E	.....	.....	.....	.....	.....	.....	.....	0	0	½ cloudy	Dr. H. Groot.
Medellin, Colombia, S. A.	25.27	641.8	.....	.....	67 2	19.6	80	SW	.....	.....	1	1k	2ks	.....	.....	0	0	Fair	Thomas Herran.
York Factory, B. A.	.....	.....	29.58	751.3	—40.0	—40.0	.....	SW	9	4.0	.....	2c	0	SW	.....	0	0	Fair	J. Fortescue, W. Wood.
Honolulu, Oahu, H. I.	.....	.....	29.81	757.2	69	20.6	94	Calm	.....	.....	0	.....	.....	.....	.....	0.86	21.8	Unsettled	Daniel Smith.
Makawao, Maui, H. I.	.....	.....	29.95	760.7	64	17.8	78	N	.....	.....	1	0	1k	.....	.....	0	0	.....	F. L. Clarke.

Marine Series.	True course towards.	Hourly rate in knots.	State of ocean.	Direction of swell from—		
Schooner Addie Fuller, Lloyds Neck.	.....	.....	.....	.....	Cloudy	Capt. James Jorgensen.

NOTE.—The originals give the cloudiness by the scale 0 to 4, except York Factory, Medellin and Paramaribo. The elevation of the barometer at Bismarck is 1,677 feet, or 511.1 meters; Cheyenne, 6,057.3 ft., or 1,846.2 m.; Clifton, about 2,899 ft., or 881.5 m.; Denver, 5,135 ft., or 1,565.2 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Florence, 1,550 (?) ft., or 472.5 (?) m.; Makawao, 2,205 ft., or 672.1 m.; Morgantown, 1,027.9 ft., or 313.3 m.; Medellin, 4,676 ft., or 1,486.2 m.; Mt. Washington, 6,285 ft., or 1,915.6 m.; North Platte, 2,846 ft., or 867.4 m.; Omaha, 1,054.6 ft., or 321.4 m.; Pike's Peak, 14,150.7 ft., or 4,313.1 m.; Salt Lake City, 4,362.2 ft., or 1,329.6 m.; Santa Fé, 6,862.2 (?) ft., or 2,091.6 (?) m.; Tucson, 2,513 (?) ft., or 772.1 (?) m.; Virginia City, 5,480 (?) ft., or 1,670.3 (?) m.; Yankton, 1,278 ft., or 389.5 m. The following constants are added in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Denver, 5.22 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fé, 6.54 in.; Tucson, 2.59 in.; Virginia City, 5.48 in. The elevation of Batavia is about 6 feet; the barometric readings need the addition of 0.2 mm. or 0.01 in. for reduction to sea-level.

UNITED STATES NAVAL SERIES.

By authority of the **SECRETARY OF THE NAVY.**

Furnished by the coöperation of the Navy Department, through Commodore Daniel Ammen, U. S. N., Chief of Bureau of Navigation.

STATIONS AND VESSELS.	True course toward—	Hourly rate in knots.	*Barometer as reported.		Temperature of the Air.		Relative Humidity.	Wind.				Clouds.				Rain-fall or melted snow in the past 24 hours.		State of Ocean.	Direction of swell from—	Weather.	Observer.
								Direction.	Velocity		Force.	Amount.		Direction.							
												Up'er	Low'r	Up'er	Low'r						
			Inches.	Millimeters.	Fahrenheit.	Centigrade.	Per cent.	From—	Miles per hour.	Meters per second.	0—10.	0—10.	0—10.	From—	From—	Inches.	Millimeters.				
Naval Academy, Annapolis, Md.			29.88	758.9	16	— 8.9	85	NNW			3		10			0	0			Overcast	
Navy Yard, Norfolk, Va.			30.36†	771.1†	25	— 3.9		N			2–3		10kn		S					‡D. clouds	
Navy Yard, Pensacola, Fla.			30.30	769.6	32.5	0.3		N			1		1							Blue sky	
Navy Yard, Portsmouth, N.H.			30.40	772.1	5	—15.0		NW			3				N&E					Pleasant	
Navy Yard, Wash'gton, D.C.			30.33	770.4	18	— 7.8		Calm			0		4							Fair	
Adams, Port Royal, S. C.			30.27	768.8	39	3.9	91	N			2		1		E					‡D. clouds	
Ajax Port Royal, S. C.			30.02	762.5	39	3.9		N			2		7		S					Pleasant	
Alarm, New York, N. Y.			29.28†	743.7†	18	— 7.8		NNE			1		9		NNW	0	0			Threatening	
Catskill, Port Royal, S. C.			30.18†	766.6†	35	1.7		NNW			4		9		W			Chop'ed	NW	Fair	
Colorado, New York, N. Y.			30.41	772.4	19	— 7.2		NNE			1		10		NNE	0	0			‡D. clouds	
Despatch, Washington, D. C.			30.35†	770.9†	15	— 9.4		Calm			0		8							Cloudy	
Dictator, Port Royal, S. C.			30.30	769.6	33	0.6	89	NNE			3		7		NE					Partly cl'dy	
Franklin, New York, N. Y.			30.37	771.4	20.5	— 6.4	100	NE			4		9		S			Smooth		‡D. clouds	
Hartford, Hampton Roads, Va.			30.44†	772.2†	25	— 3.9		N			3		10		S	0	0	Moderate	N	Overcast	
Huron, Port Royal, S. C.			30.31	769.9	32.5	0.3	94	N			2		7		N&E					‡D. clouds	
Intrepid, New York, N. Y.			30.37	771.4	19	— 7.2		NE			1		9		NNW					Threatening	
Michigan Erie, Pa.			30.06	763.5	19	— 7.2	84	S			5		Haze							Hazy	
Minnesota, New York, N. Y.			30.43	772.9	19	— 7.2	100	NE			4		9		WSW					Cloudy	
Monongahela, Baltimore, Md.			30.31	769.9	16	— 8.9		NW			1		..ck		SE					‡D. clouds	
New Hampshire, Port Royal, S. C.			30.37	771.4	35	1.7		N			2		6		N			Smooth		‡D. clouds	
Ossipee, New Orleans, La.			30.32	770.1	34	1.1		SE			1		2							Hazy	
Santee, Annapolis, Md.			29.88†	758.9†	18	— 7.8		NNW			3		10							Overcast	
St. Louis, League Island, Pa.			30.15	765.8	18.5	— 7.5		N			4		3		NE	0	0			Fair	
Swatara, New York, N. Y.			30.44	773.2	16	— 8.9		NNE			3		1ks		NE					‡D. clouds	
Tallapoosa, Washington, D. C.			30.20	767.1	14	—10.0		NNW			2		9		E					‡D. clouds	
Wabash, Boston, Mass.			30.48	774.2	7	—13.9		NNW			1		2		S & E					‡D. clouds	
Wyoming, Washington, D.C.			30.79†	782.1†	13	—10.6		E			1		9							Overcast	

* It is not known that the barometer is corrected for temperature, instrumental error or elevation. † Aneroid Barometer. ‡ Detached clouds.

COLLATED AT THE OFFICE OF THE CHIEF SIGNAL OFFICER OF THE ARMY, WASHINGTON, D. C.

The records which appear in this Bulletin are copied from the regular exchanges of this office, made in each instance in compliance with an especial request, and are published for the uses of the coöperating observers. The barometric readings in the first two columns are reduced to freezing and their respective standards; those in the second two also to mean sea-level. The "weather" is generally published as given.

When the distinction between the upper and lower strata of clouds is not reported, the *kinds* or *types*, viz: cirrus, cumulus, stratus, nimbus, scud, fracto, pallio, haze, fog and smoke, as indicated, respectively, by the letters c, k, s, n, d, f, p, hz., fg. and sm'e, are generally published with the amount in the lower-cloud column. The distinction between the upper and lower strata is carefully made in the United States Series and a portion of the Canadian Series, and the types are indicated by the above letters or their combinations in the proper column.

Albert J. Myer

Brig. Gen. (Bvt. Assg^d.,) Chief Signal Officer, U. S. A.

BULLETIN

OF

INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON JANUARY 11, 1877.

7:35 A. M. WASHINGTON mean time.

6:7 A. M. MEXICO mean time.
7:7 A. M. SAN JOSE mean time.
0:6 P. M. LISBON mean time.
0:28 P. M. MADRID mean time.
0:43 P. M. GREENWICH mean time.
0:53 P. M. PARIS mean time.
1:1 P. M. BRUSSELS mean time.
1:4 P. M. UTRECHT mean time.
1:13 P. M. BERNE mean time.

1:26 P. M. CHRISTIANIA mean time.
1:33 P. M. COPENHAGEN mean time.
1:33 P. M. ROME mean time.
1:37 P. M. BERLIN mean time.
1:49 P. M. VIENNA mean time.
1:55 P. M. STOCKHOLM mean time.
2:18 P. M. ATHENS mean time.
2:39 P. M. CONSTANTINOPLE mean time.
2:44 P. M. ST. PETERSBURG mean time.

ALGERIAN SERIES.

Furnished by the coöperation of General d'Eudeville, Commandant Supérieur du Génie in Algeria.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Nemours			30.26	768.7	69 1	20.6	51	Calm			0		0			0	0	Fair	Charnot.
Algiers			30.22	767.6	55.0	12.8		Calm			0		5			0	0	Fair	Peter.
La Calle			30.12	765.0	66.6	19.2	70	NNW			1		4			Inap.	Inap.	Fair	Fleury.
Tunis			30.13	765.3	66.2	19.0		W			1		1			0	0	Clear	Jacques.
Sfax																			
Sidda			30.25	768.4	68.0	20.0	11	S			1		2			0	0	Clear	Millot.
Tebessa			30.16	766.0	68.4	20.2		SSE			1		0			0	0	Clear	Bourgeois.
Gerlville			30.23	767.9	60.1	15.6	30	N			4		2			0	0	Clear	Lemaillot.
Laghouat			30.18	766.5	68.0	20.0	15	W			1		1			0	0	Clear	Guyot.
Biskra			30.19	766.8	69.4	20.8	39	NW			2		4			0	0	Fair	Kuntz.

NOTE.—In the originals the distinction between the amount of upper and lower clouds is apparently not made. The weather is published as given. The rain-fall is measured at 7 a. m., local time.

AUSTRIAN SERIES.

Furnished by the coöperation of Professor Ferdinand Osnaghi, Director of the Imperial and Royal Central Meteorological Institute at Vienna.

Agram			29.88	758.9	52.7	11.5	69	SW			4		6			0.151	4.6		Prof. Ivan Stozir.
Cracow, I. R. Observatory			29.83	757.6	39.6	4.2	97	NE			1		10			0.476	12.1		Dr. Wierzbicki.
Eperies			29.80	756.9	43.7	6.5	87	Calm			0		10			0	0		Julius Mikolik.
Gratz	28.99	728.8	29.09	761.7	37.8	3.2	88	S			2		10			0	0		Andreas Rospini.
Hermannstadt	28.36	720.3	29.78	756.5	48.9	9 4	57	SE			1		3			0	0		Prof. Reissenberger.
Kremsmünster	28.53	724.6	29.89	759.1	43.9	6.6	94	Calm			0		7			0.008	2.5		Prof. C. Wagner.
Lemberg			29.78	756.3	39.0	3.9	98	S			1		10			0.331	8.4		Dr. T. Stanecki.
Nyiregyhaza																			Habzsuda Daniel.
Pola			30.347	770.77	53.4	11.9	93	Calm			0		10s			0	0		I.R.Hydrographic Office.
Szegedin			29.88	759.0	42.4	5.8	81	N			1		10			0	0		Karl Stancel.
Trieste			29.98	761.4	48.4	9.1	100	Calm			0		10			0.402	10.2	Rain and fog	Prof. V. Faroli.
Vienna			29.84	757.9	49.8	9.9	79	W			3		9			0	0		I. R. Central Met. Obs'y.

NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather *remarks refer to the exact moment of observation.* At Lemberg the rain-fall is measured at 7 p. m., local time. The elevation of Gratz is 343.5 meters, or 1,126.9 feet; Hermannstadt, 407.8 meters, or 1,337.9 feet; Kremsmünster, 383.0 meters, or 1,258.5 feet.

BELGIAN SERIES.

Furnished by the coöperation of J. C. Houzeau, Director of the Royal Observatory at Brussels.

Arlon			29.69	754.2	43.0	6.1	96	SSW			5		10			1.039	26.4		
Brussels			29.54	750.2	48.4	9.1	91	S			2		10		SSW	0.331	8.40	Light rain	Royal Observatory.
Furnes			29.49	749.1	46.4	8.0	97	ENE			2		10			0.673	17.1		
Maeseyck			29.60	751.8	47.7	8.7	88	S			2		10			0.142	3.6		

NOTE.—In the originals, the weather is occasionally given in general notes.

BRITISH SERIES

Furnished by the coöperation of Robert H. Scott, Esq., Director of the Meteorological Office, London, Alexander Buchan, Secretary of the Scottish Meteorological Society, Edinburgh, and the respective Observers.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Aberdeen			29.94	760.5	37.2	2.9		SE	13	5.8			6			0	0	*D. clouds	William Boswell.
Ardrossan			29.89	759.2	39	3.9		ENE			2		7					*D. clouds	William McNeil.
Armagh, Observatory			29.86	758.4	42.0	5.6		SE	11	4.9			7					*D. clouds	S. Call, for Dr. Robinson.
Birr Castle, (Parsonstown)			29.83	757.7	43.4	6.3		SE			2		9					*D. clouds	J. Dreyer.
Bradford			29.83	757.7	38.3	3.5		N			1		10			0.02	0.5	Overcast	J. McLandsborough.
Bridgetown, (Barbados)			30.11	764.8	80	26.7		NE			3		6					*D. clouds	Sergt. J. F. Halanen, A.
Cambridge, Observatory			29.72	754.9	38.0	3.3		NNE			3		10			Blank	Blank	Overcast	H. Todd. [H.C
Cardington			29.75	755.6	38.4	3.6		NNE			4		10					Overcast	John McLaren.
Carlisle																			T. Bell, for J. Cartmell
Chatham, School M. E.			29.63	752.6	42.7	5.9		NE			4		10					Threatening	Maj. C. N. Martin, R.E
Dartmoor	28.34	719.8	29.87	758.7	37.0	2.8		NE			4		10					Gloomy	R. E. Power.
Davos Platz, (Switzerland)	24.70	627.4			38.0	3.3	79	Calm			0		1			0	0	Blue sky	Francis Redford, M. A.
Donaghadee			29.86	758.4	40	4.4		SSE			3		7					*D. clouds	J. Mac Gowan.
Dover			29.52	749.8	44	6.7		NE			4		9					Raining	J. Costello.
Eccles, (near Manchester)			29.83	757.7	40.8	4.9		NE	1.6	0.7			7					*D. clouds	Thomas Mackereth.
Falmouth, Observatory			29.86	758.4	44.4	6.9		NNW			1		6					Overcast	The Staff.
Fort Napier, (Natal)	27.41	696.2	29.64	752.8	87.8	31.0		NE			2		9					*D. clouds	P'vt. G. Salmon, A. H. C
Free Town, (Sierra Leone)			29.85	758.2	87.0	30.6		Calm			0		3					*D. clouds	
Galway, Queen's College			29.73	755.1	43	6.1		E			2		2					Raining	Prof. A. H. Curtis.
Gibraltar, (Mediterranean)			30.27	768.8	61.3	16.3		NW			2		9					Overcast	Corpl. C. Aitken, A.H.C.
Glasgow, Observatory			29.90	759.4	37.3	2.9		ENE			1		10					Overcast	Lewis Stuart.
Great Yarmouth			29.67	753.6	40	4.4		NE			6		8					Overcast	G. T. Watson.
Greenwich, Royal Obs'y			29.69	754.1	38.2	3.4		NNE			4		10					Raining	The Staff, for G. B. Airy.
Guernsey			29.75	755.6	43	6.1		NW			3		10					Raining	Dr. S. E. Hoskins.
Helston			29.85	758.2	49	9.4		N			4		4c			0.50	12.7	Fine	M. P. Moyle.
Holyhead			29.85	758.2	40	4.4		E			2		1					Blue sky	John Tilston.
Kew, Observatory			29.71	754.6	39.0	3.9		NNE	20	8.9			10					Raining	The Staff.
Kingstown			29.87	758.7	44	6.7		E			3		10					Overcast	George Mitchell.
Leicester Museum			29.79?	756.7?	37.9	3.3		N			2		10					Overcast	Wm. J. Harrison, F.G.S.
Malta, (Mediterranean)			30.02	762.5	63.6	17.6		SW			3		4k					*D. clouds	Corp'l. P. Bravis, A.H.C.
Nairn			29.87	758.7	36	2.2		Calm			0		0					Clear	W. D. Penny.
Nassau, (Bahamas)			30.22	767.6	72.5	22.5		NE			4		3					*D. clouds	Surg. Maj. Henry.
Nottingham, Observatory			29.82	757.4	37.2	2.9		NE			5		10d		NE	0.001	0.03	Overcast	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			29.81	757.2	37.2	3.1		NNE			3-4		9					*D. clouds	Rev. Stephen Whitty.
Oxford, Radcliffe Obs'y			29.76	755.9	40	4.4		N			1		10					Gloomy	J. Lucas.
Plymouth			29.83	757.7	42.0	5.6		NNW			1		10					Overcast	John Merrifield.
Roche's Point			29.84	757.9	44	6.7		NNW			2		5					Cloudy	W. Kennedy.
Saint Ann's Head			29.82?	757.4?	42	5.6		ENE			1		0					Blue sky	John C. Walker.
Saint Helier, (Jersey)			29.74	755.4	44.4	6.9		N			3		10					Raining	A. P. Amy.
Sandwick Manse, (Orkneys)			29.92	760.0	32.6	0.5		Calm?	1?	0.4?			8					*D. clouds	Rev. C. Clouston, LL. D.
Scarborough																			F. Shaw.
Scutari Cemetery, (Turkey)			29.94	760.5	48.7	9.3		SSW			1		5					*D. clouds	Sergt. W. H. Lyne.
Sheffield			29.83	757.7	39.0	3.9		NE			2		9			0.007	0.18	Overcast	W. F. Cooper.
Silloth Rectory			29.87	758.7	38.0	3.3	75	SE			1		6			0	0	*D. clouds	Rev. Francis Redford
Stonyhurst, Observatory			29.85	758.2	37.4	3.1		NE			1		10s					Overcast	Rev. S. J. Perry.
Stornoway, Lews C., (Hebr.)			29.77	756.1	38	3.3		S			5		10					Threatening	John Smith.
Stratfield Turgiss			29.73	755.1	38.6	3.7		NE			2		9					Drizzling	Rev. Charles H. Griffith
Thurso			29.89	759.2	35	1.7		SE			2		7					*D. clouds	John Trotter.
Truro, Royal Institution			29.84	757.9	47	8.3		N			2		4					*D. clouds	W. Newcombe.
Valencia, Observatory			29.84	757.9	47.1	8.4		WNW	15	6.7			7					*D. clouds	The Staff.
SUB-SERIES.																			
Calf of Man, (Isle of Man)					50	10.0		SE			2		10			0	0		Henry Mercer.
Cape Good Hope, Obs'y			30.01	762.2	71.8	22.1	71	W	7	3.1		10	9						The Staff, for E. J. Stone.
Hobart Town, (Tasmania)			29.51	749.5	67.6	19.4	94	W			3		4k			0.12	3.0		Francis Abbott, F.R.A.S.
Leith, Restalrig Park			29.92	760.0	37.4	3.0		SE			1		10k			0	0	Overcast	Andrew Gibb.
Mauritius, Observatory			29.98	761.5	84.6	29.2	57	E	19.3	8.6		0	3		ESE	0.04	1.0	Squally	C. Meldrum.
Melbourne, Observatory			29.95	760.7	57.0	13.9	55	W	14	6.3			6			0.22	5.6	Boisterous	R. L. J. Ellery.
Monach L't-house, (Hebrides)			29.68	753.9	41	5.0		SSE			6		10			0	0		J. Youngclause.
North Unst, (Shetland Is.)			29.98	761.5	36	2.2		SE			6	7	10	S		Blank	Blank		Robert Burnet.

NOTE.—Generally, the originals do not give the relative humidity, rain-fall, or distinction between upper and lower clouds. The originals give the wind direction to 32 points and weather by the Beaufort notation. The originals give the barometer for Aberdeen, Cardington, Galway, Oxford, St. Helier, Sandwick, Scarborough, Stonyhurst, Leith, Monach and North Unst as read off and the cloudiness for Stornoway by the scale 0 to 4. The wind-force is given by the scale 0 to 12 in the official series; 0 to 6 in the sub-series; except in lbs. per square foot for Greenwich and Hobart Town. The rain-fall is measured at Aberdeen at 10 a. m.; Bradford, 9 a. m.; Hobart Town, 7:30 a. m.; Nottingham, 6 p. m.; Mauritius, 9 a. m., local time. The elevation of Dartmoor is 1,400 feet, or 426.7 meters; Davos Platz, 5,105? feet, or 1,556.0? meters; Fort Napier, 2,200 feet, or 670.6 meters. *Detached clouds.

By authority of the
MINISTER OF FOREIGN AFFAIRS.

COSTA RICA SERIES.

Furnished by the coöperation of Senor Federico Maison, Director of the Central Office of Statistics and Meteorology.

San José																			

DANISH SERIES.

Furnished by the coöperation of Captain N. Hoffmeyer, Director of the Royal Danish Meteorological Institute at Copenhagen.

Copenhagen			30.03	762.8	31.8	— 0.1	90	ESE			6		2						
Fanöe			29.97	761.1	32.4	0.2	90	E			6		9						
Godthaab, (Greenland)			29.35	745.4	7.9	—13.4	100	SE			2		10					Snowing	
Stykkisholm, (Iceland)			29.03	737.3	32.2	0.1	96	S			4		10					Snowing	
Thorshavn, (Faröe)			29.81	757.1	38.1	3.4	70	SSE			6		7						
Vestervig			30.08	764.1	28.4	— 2.0	92	E			6		10						

NOTE.—The originals give the wind-force by the scale 0 to 6; occasionally, weather by Vienna symbols; no distinction between the amount of upper and lower clouds.

FRENCH SERIES.

Furnished by the coöperation of His Excellency, U. J. Le Verrier, Director of the Paris Observatory, and the respective Observers.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather	Observer.
Alençon			29.72	755.0	50.0	10	91	SW			4		10			0.47	12.	Covered	Normal School.
Amiens			29.47	748.6	50.0	10.0	97	WSW			2		0			0.213	5.4	Clear	Normal School.
Avignon			30.01	762.3	49.3	9.6	92	SE			1		8		W	0	0	Very cloudy	Normal School.
Bar-sur-Seine			29.82	757.5	49.5	9.7	66	WSW			6		10n		SW	0.035	0.9	Covered	C. Saillard.
Beaumette, (near Angers)			29.81	757.2	48.0	8.9	65	W	53.2	23.8					W	0.240	6.1		Beaumette Observ'tory.
Beauvais			29.56	750.7	49.3	9.6	77	SW			6		10		WSW	0.16	4.	Covered	Normal School.
Besançon			29.94	760.4	51.1	10.6	68	SSW			4		10			0.134	3.4	Covered	Normal School.
Bourg en Bresse			29.96	760 9	51.3	10.7	78	S			2		8kn		NE	0	0	Very cloudy	Normal School.
Bourges			29.82	757.3	51.4	10.8	77	WSW			6		5		SW	0	0	Cloudy	Normal School.
Brest			29.82	757.4	49.8	9.9	76	WNW			3		8		WNW	0.453	11.50	Squally	Naval Observatory.
Carcassonne			30.03	762.7	53.6	12	90	E			2		5		W	0	0	Cloudy	Normal School.
Caen																			Normal School.
Chartres			29.69	754.2	44.8	7.1	92	W			6		10		E	0.016	0.4	Covered	Normal School.
Châlons-sur-Marne			29.67	753.6	47.3	8.5	89	SSW			4		10n		NNE	0.217	5.5	Raining	Normal School.
Clermont			29.91	759.6	54.3	12.4	56	SW			4		5		SW	0	0	Cloudy	Puy de Dome Obs'y.
Commercy			29.78	755.2	46.4	8	83	SW			6		10			0.098	2.5	Covered	Normal School.
Commune de Gréasque*			30.10	764.5	52.7	11.5	73	NW			2		10		SW	0	0		M. Kina.
Grenoble			30.00	762.0	46.8	8.2	90	NE			1		10n		E	0	0	Covered	Normal School.
La Roche-sur-Yon			29.92	760.0	52.2	11.2	73	SW			1		8		NW	0.047	1.2	Very cloudy	Normal School.
Le Mans			29.76	755.9	45.0	7.2	91	W			4		8		W	0.59	15.	Very cloudy	Normal School.
Lons-Le-Saulnier			29.93	760.2	53.4	11.9	54	SSW			6		10		E	0	0	Covered	Normal School.
Lorient			29.90	759.4	51.1	10.6	72	WNW			2		10			0.398	10.1	Covered	Naval Observatory.
Mâcon			30.02	762.4	50.7	10.4	93	S			2		10			0	0	Covered	Normal School.
Metz			29.80	757.0	45.7	7.6	95	SSW			4		10			0.138	3.5		M. Schuster.
Mirecourt			29.77	756.1	47.1	8.4	67	SW			8		10		NE	0	0	Covered	Normal School.
Nismes			30.07	763.7	55.0	12.8	75	NE			1		5		E	0	0	Cloudy	Normal School.
Orleans			29.71	754.5	49.6	9.8	81	SW			4		5		W	0.04	1.	Cloudy	Normal School.
Paris, Observatory			29.63	752.5	48.0	8.9	78	SW			6		10kn		WSW	0.004	0.09	Covered	National Observatory.
Parthenay																			Normal School.
Privas			29.98	761.6	51.8	11		SSW			2		10		SSW	0	0	Covered	Normal School.
Rochefort, Observatory			29.95	760.7	51.4	10.8	77	W			4		8		NE	0	0	¾ covered	Naval Observatory.
Rouen			29.55	750.6	48.4	9.1	86	W			6		10		SW	0.158	3.8	Covered	Normal School.
Saint Lo																			Normal School.
Tarbes	28.90	734.0	29.98	761.5	52.7	11.5	95	W			2		5		E	0	0	Cloudy	Normal School.
Villefranche			30.00	761.9	55.4	13	81	SE			2		8		NW	0	0	Very cloudy	Normal School.
Sub-Series.																			
Fort de France, Martinique			29.99	761.7	75.6	24.2													L'Abbé Marchési.
Marseilles			30.01	762.3	56.1	13.4	80	WNW			1		10			0.077	1.90	Raining	Marseilles Observatory.
Mont-Louis	24.82	630.4	30.13	765.4	39.7	4.3	73	SSW	16.8	7.50			8		SSW	0	0		—. Falguère.
Montsouris, Paris			29.61	752.2	47.7	8.7	82	WSW			6		10		WSW	Inap.	Inap.		Montsouris Observatory
Perpignan			30.04	763.1	52.9	11.6	81	W	3.7	1.67			10			0.437	11.1		Dr. Fines.
Pic du Midi, (Summit,) H. P.																			M. Baylac.
Pic du Midi, (Plantade,) H. P.	22.36	567.9			25.5	— 3.6		S			2		10			0.443	11.4	Snowing	General de Nansouty.
Saint Maur, (near Paris)			29.63	752.6	47.7	8.7	81	SSW			4		10			0	0	Covered	E. Renou.
Toulouse			30.07	763.6	49.1	9.5	95	NNW			1		9			0.161	4.1		Toulouse Observatory.
Tours			29.80	757.0	52.2	11.2	72	W			4		9		W	0	0		C. Marquet.
Versailles, (near Paris)			29.63	752.6	47.1	8.4	86	W			4		10			0.020	0.50	Covered	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai)			30.50	774.6	41.2	5.1	90	ENE	7.1	3.17			0			0	0		Marc Dechevrens, S. J.

NOTE.—Generally, the originals give the wind-force by the scale 0 to 7; no distinction between upper and lower clouds, and, in the official series, the amount by the scale 0 to 4; the rain-fall as measured at 7, 8 or 9 a. m., local time; at Clermont, 9 a. m. of the following day; the weather in general terms as published. The elevation of Clermont is 388 meters, or 1,272.9 feet; Commune de Gréasque, 322 meters, or 1,056.4 feet; Tarbes, 308 meters, or 1,010 feet; Mont-Louis, 1,586.40 meters, or 5,204.8 feet; Pic du Midi, (Summit,) 2,877 meters, or 9,439.1 feet; Pic du Midi, (Plantade,) 2,366 meters, or 7,762.6 feet. In correcting the Mont-Louis barometric observations for altitude, the constant 135. millimeters has been added. *Bouches-du-Rhône

GERMAN SERIES.

Furnished by the coöperation of Professor Dr. G. Neumayer, Director of the German Naval Observatory, Hamburg.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather	Observer.
Bamberg			29.85	758.2	46.9	8.3	89	SW			3		10	SW		0.315	8.0	Foggy	Prof. T. Hoh.
Berlin			29.88	758.9	33.8	1.0	95	E			1		10			0.157	4.0	Snowing	Prof. Arndt,
Breslau			29.82	757.5	36.7	2.6	100	ESE			3		10			0.276	7.0	Raining	Royal University Obs'y
Carlsruhe			29.74	755.5	54.3	12.4	56	SW			10		9			0.197	5.0		A. Senz.
Cassel			29.65	753.0	46.0	7.8	88	SW			2		10	SW		0.114	2.9		Dr. H. Möhl.
Crefeld			29.58	751.4	47.3	8.5	93	SE			2		10			0.83	21.		Director Lose.
Emden			29.84	758.0	34.3	1.3	84	ENE			3		10			0.059	1.5		Prof. Prestel.
Frankfort on the Main			29.76	755.9	48.4	9.1	78	SSW			1		10			0.177	4.5		Physical Society.
Friedrichshafen	28.44	722.3	29.88	758.9	40.6	0.8	72	SW			6		3			0.012	0.3		M. Wilhelm.
Hamburg			29.84	758.0	32.5	0.3	92	ENE			5		10					Graupel, fog	Captain F. Hegemann.
Kiel			29.87	758.6	34.0	1.1	78	ENE			4		10			0	0		Prof. G. Karsten.
Königsberg, (Prussia)			30.07	763.8	26.4	— 3.1	90	E			5		5			0	0		Prof. E. Luther.
Köslin			30.00	762.1	32.5	0.3		E			2		10			0	0		H. Müller.
Leipsic			29.83	757.6	30.4	4.1	97	E			2		10			0.252	6.4	Foggy	Prof. Bruhns.
Memel			30.17	766.2	25.3	— 3.7	90	ENE			4		0			0.020	0.5		Reinbrecht & Skalweit.
Münster			29.53	750.1	45.1	7.3	93	N			1		10			0.335	8.5		Prof. E. Heis.
Neufahrwasser			30.04	763.0	29.8	— 1.2	80	ENE			4		10			0	0		A Lothe.
Posen			29.90	759.5	34.5	1.4	77	SE			3		10			0.067	1.7	Snowing	Dr. Magener.
Strassburg, (in Alsace)			29.80	756.8	53.2	11.8	51	WSW			4		4	SW		0.154	3.9		Dr. Schur.
Stuttgart			29.77	756.1	52.2	11.2	48	W			4		2			0	0		Prof. Schoder.
Thorn																			Dr. Hasenbalg.
Treves, (Trier)			29.62	752.4	47.3	8.5	82	SW			9		10			0.461	11.7		Prof. Flesch.
Weissenburg, (Bavaria)	28.32	719.2	29.82	757.4	50.5	10.3	73	SSW			3		8	W		0.075	1.9		Dr. von Bebber.
Wustrow, Naval School			30.02	762.4	32 2	0.1	90	E			3		10			0	0		E. F. Schütz.
German Naval Series.																			

NOTE.—The elevation of Friedrichshafen is 412.4 meters, or 1,352.9 feet; Weissenburg, 431 meters, or 1,414.0 ft. In the originals the distinction between the amount of upper and lower clouds is not made. It is not always certain that the remarks in the weather column refer to the moment of observation.

GREEK SERIES.

Furnished by the coöperation of Professor Dr. J. F. Julius Schmidt, Director of the Royal Observatory at Athens.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Athens			29.99	761.8	57.4	14 1		S										Clear & dusty	

Note.—The originals give the barometer corrected, but not reduced to sea-level; occasionally the kind of clouds; the weather as published. They omit the humidity, wind-force, amount of cloudiness and rain-fall.

ITALIAN SERIES.

Furnished by the cooperation of His Excellency the Minister of Agriculture, Industry and Commerce, and the respective Observers.

Udine			29.95	760.6	47.5	8.6	85	Calm	0	0			10			0.051	1.3	Foggy	Prof. Giovanni Iodic.
Stelvio	22.00	558.9			23.9	— 4.5		W			1		5	N		0	0		Signora Ernesta Manfredi.
Valdobbia	22.02	559.3			24.8	— 4.0	79	WSW			6		8	NW		0	0		Ab. Dom. Mongini.
Padua			29.95	760.7	45.9	7.7	96	N	2.5	1.1			10			0.039	1.0	Light rain	Prof. Dott. Lorenzoni.
Vicenza			29.95	760.6	46.6	8.1	86	NW	19.4	8.6			10	E		0.043	1.1	Light rain	Conte Alm. Da Schio.
Verona			29.97	761.3	49.1	9.5	86	E			2		10			0.098	2.5	Raining	Dott. B. Bertoncelli.
Bergamo	28.53	724.6	29.89	759.1	45.0	7.2	91	SW			1		10			0	0		Prof. Trionfini Carlo.
Domodossola			29.96	760.9	50.0	10.0	76	Calm			0		5			0	0		Prof. Giuseppe Cozzi.
Milan			29.96	760.9	47.7	8.7	96	E			1		10			0.008	0.2	Light rain	Ab. Gio. Capelli.
Pavia			29.96	761.0	48.2	9.0	89	SW			1		10			0	0		Prof. Gio. Cantoni.
Moncalieri			29.99	761.7	43.2	6.2	97	NNW	0.7	0.3			10			0.011	0.3	Light rain	Prof. P. F. Denza.
Mondovi	28.00	711.3	29.98	761.6	47.5	8.6	73	N			2		8			0	0		Prof. D. C. Bruno.
Porto Maurizio			30.00	762.1	56.1	13.4	75	SW			2		9	W		0.039	1.0	Light rain	Prof. L. Vassallo.
Genoa			29.96	761.0	55.9	13.3	85	SE	2.5	1.1			10	S		0.012	0.3	Light rain	Prof. G. M. Garibaldi.
Piacenza			29.97	761.3	48.7	9.3	92	NW	0	0			10			0	0		Dott. G. Manzi.
Parma			29.97	761.2	50.0	10.0	99	NW			4		10			0	0		Prof. P. Pigorini.
Florence			30.00	762.1	51.8	11.0	92	W			2		10	WSW		0	0		Cav. F. Meucci.
Leghorn			30.00	761.9	58.1	14.5	80	SW	8.1	3.6			9	W		0	0		Prof. P. Monte.
Siena	28.76	730.5	30.00	762.0	55.2	12.9	84	SW	1.8	0.8			6	SW		0	0		Prof. L. Toscani.
Urbino	28.45	722.7	30.06	763.5	51.6	10.9	76	SW			4		10			0	0		Prof. P. Serpieri.
Pesaro			29.98	761.6	45.1	7.3	96	N	0	0			10	W		0	0		Prof. Luigi Guidi.
Ancona			29.98	761.5	55.0	12.8	77	SE			2		10			0	0		Prof. F. De— Bosis.
Grosseto			30.04	763.1	59.7	15.4	76	S			2		6	NW		0	0		Avv. P. Ponticelli.
Rome			30.04	763.1	59.5	15.3	77	S	11.2	5.0			9	S		0	0		Prof's P. Secchi & L. Respighi.
Naples, O. U.			30.07	763.8	59.2	15.1	78	S			2		10	SW		0	0		Prof. L. Palmieri.
Lecce			30.08	763.9	53.6	12.0	83	NNW	8.7	3.9			8			0.024	0.6	Light rain	Prof. C. De—Giorgi.
Cosenza			30.06	763.5	60.8	16.0	62	WSW	10.5	4.7			10			0	0		Prof. F. D. Conti.
Cagliari																			Prof. A. Pacinotti.
Riposto, (Sicily)			30.10	764.6	59.7	15.4	75	S			2		3			0	0		Prof. F. Caffero.
Palermo			29.97	761.3	59.5	15.3	60	NE	1.8	0.8			9			0	0		Prof. G. Cacciatore.
Caltanissetta	28.10	713.7	30.08	764.0	64.0	17.8	68	W			1		7	SE		0	0		Prof. A. Pagani.
Siracusa			30.04	763.0	58.6	14.8	84	E			1		8	SSW		0	0		Prof. V. Giuliano.
Sub-Series.																			
Naples, S. R.			30.15	765.9	55.9	13.3	85	NW	1.8	0.6			9	W		0	0		Prof. F. Brioschi

Note.—The originals give the wind-force by the scale 0 to 4, or the velocity in kilometers per hour; generally, no distinction between upper and lower clouds; occasionally the weather by the Vienna symbols. The elevation of Stelvio is 2,543.0 meters, or 8,342.9 feet; Valdobbia, 2,548.0 meters or 8,359.3 feet; Bergamo, 379.0 meters, or 1,245.3 feet; Mondovi, 556 meters, or 1,824.2 feet; Siena, 348.5 meters, or 1,143.3 feet; Urbino, 451 meters, or 1,479.7 feet; Caltanissetta, 570.3 meters, or 1,871.0 feet.

Furnished by the coöperation of the Imperial University of Tokei, Japan.

JAPANESE SERIES.

Tokei			30.44	773.2	30	— 1.1		Calm	0	0			0			0	0		Prof. P. V. Veeder.

Note.—The originals give the amount of cloudiness by the scale 0 to 4 without distinguishing between upper and lower clouds. The rain-fall is measured at 7 a. m., local time.

By authority of the Secretary of Public Works.

MEXICAN SERIES.

Furnished by the coöperation of Senor Mariano Barcena, Director of the Central Meteorological Observatory in the City of Mexico.

Mexico	Mariano Barcena.
	Vicente Reyes.
	Miguel Perez. (Engineers in charge.)

Note.—The elevation of Mexico is 2,290 meters, or 7,512.9 feet. The rain-fall is measured at 6 a. m., local time.

NETHERLANDS' SERIES.

Furnished by the coöperation of Professor Buys Ballot, Director of the Royal Meteorological Institute of the Netherlands at Utrecht.

Flushing			29.56	750.7	42.8	6.0		ENE			4					0.327	8.3		
Groningen			29.67	753.6	33.4	0.8		NE			5					0	0		
Helder			29.66	753.4	35.6	2.0		NE			5					0	0		
Utrecht			29.58	751.3	37.2	2 9	91	ENE			4		10			0.480	12.2	Dull	

Note.—The originals give the wind-pressure in kilograms per square meter; for Utrecht, they give the weather as published, from which the amount of cloudiness is taken by the scale 0 to 4, without distinguishing between upper and lower clouds. It is assumed that the barometer readings have been reduced to sea-level.

NORWEGIAN SERIES.

Furnished by the coöperation of Professor H. Mohn, Director of the Royal Norwegian Meteorological Institute at Christiania.

Bergen			30.16	766.0	22.6	— 5.2	80	Calm	0	0			0			0	0		
Bröno			30.12	765.1	30.6	— 0.8	94	SSE	29.1	13			10						
Christiania			30.30	769.7	7.9	—13.4	76	ENE	3.1	1.4			0			0	0		
Tromsö			29.76	756.0	31.3	— 0.4	89	SW	6.7	3			10			0	0		

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols. The cloudiness and weather at Bergen refer to 2h., p. m., local time, instead of 1h., 4 min.

PORTUGUESE SERIES.

Furnished by the coöperation of J. C. de Brito Capello, Director of the Meteorological Observatory of the Infante Don Luiz at Lisbon.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Angra, (Azores)	.....	.....	30.53	775.4	51.4	10.8	85	NNW	2.5	1.1	.....	.....	4	.....	.....	0	0	.....	Dr. J. A. Sampaio.
Campo Major	.....	.....	30.28	769.0	53.6	12.0	76	SW	9.4	4.2	.....	.....	4	WNW	.....	0.039	1.0	Solar corona	Dr. A. M. R. dos Santos.
Funchal, (Madeira)	.....	.....	30.37	771.3	64.8	18.2	67	SW	5.6	2.5	.....	.....	3	.....	.....	0	0	.....	Capt. D. A. de Cunha.
Lisbon	.....	.....	30.34	770.6	55.8	13.2	73	NW	8.7	3.9	.....	.....	5	.....	.....	Inap.	Inap.	.....	The Observatory.
Ponta Delgada, (Azores)	.....	.....	30.55	776.0	57.2	14.0	67	NNE	0	0	.....	.....	3	.....	.....	0	0	.....	
.....																			

Note.—The originals give the wind-velocity in kilometers per hour; occasionally, the weather by the Vienna symbols; the amount of cloudiness without distinguishing between upper and lower clouds; the barometer corrected but not reduced to sea-level. The rain-fall at Libson is measured at noon, instead of 0 h. 6 m., p. m.

RUSSIAN SERIES.

Furnished by the coöperation of Professor H. Wild, Director of the Imperial Central Physical Observatory of Russia, at St. Petersburg.

Warsaw	.....	.....	29.92	759.9	35.4	1.9	77	ENE	7	3	.....	.....	10	.....	.....	.....	.....	.....	Astronomical Obs.
Wilna	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Astronomical Obs.
Dorpat	.....	.....	30.27	768.9	17.8	— 7.9	88	NW	2	1	.....	.....	0	.....	.....	.....	.....	.....	Physical Cabinet.
St. Petersburg	.....	.....	30.22	767.5	9.1	—12.7	89	NW	7	3	.....	.....	0	.....	.....	.....	.....	.....	Central Physical Obs.
Kuopio	.....	.....	30.16	766.1	— 7.6	—22.0	100	Calm	0	0	.....	.....	0	.....	.....	.....	.....	.....	Ch. Forsten.
Kieff	.....	.....	29.91	759.8	34.5	1.4	100	NE	2	1	.....	.....	10	.....	.....	.....	.....	Light rain...	Physical Cabinet.
Nikolaiev	.....	.....	29.99	761.7	36.9	2.7	94	SSE	9	4	.....	.....	10	.....	.....	.....	.....	.....	Kurdakof
Kertch	.....	.....	30.06	763.4	40 6	4.8	92	ENE	9	4	.....	.....	10	.....	.....	.....	.....	.....	Lagorio.
Moscow	.....	.....	30.19	766.8	16.5	— 8.6	73	N	4	2	.....	.....	0	.....	.....	.....	.....	.....	Meteorological Obs.
Lugan	.....	.....	29.98	761.6	36.5	2.5	84	SSW	7	3	.....	.....	10	.....	.....	.....	.....	.....	Meteorological Obs.
Archangel	.....	.....	29.89	759.3	6.1	—14.4	93	Calm	0	0	.....	.....	1	.....	.....	.....	.....	.....	Ogorodnikof.
Tiflis	28.07	723.1	30.11	764.7	49.8	9.9	40	Calm	0	0	.....	.....	0	.....	.....	.....	.....	.....	Physical Observatory.
Astrakhan	.....	.....	30.12	765.1	31.5	— 0.3	87	W	2	1	.....	.....	10	.....	.....	Blank	lank	.....	Sebastianof.
Kasan	.....	.....	29.66	753.3	24.1	— 4.4	69	WSW	22	10	.....	.....	3	.....	.....	.....	.....	.....	Physical Cabinet.
Orenburg	.....	.....	30.63	778.1	— 6.9	—21.6	63	E	13	6	.....	.....	5	.....	.....	.....	.....	.....	Tschernischei.
Ekaterinburg	28.74	730.1	29.74	755.4	21.7	— 5.7	87	SSW	11	5	.....	.....	10	.....	.....	.....	.....	.....	Meteorogical Obs.
Nukuss	.....	.....	30.30	769.7	33.8	1.0	35	S	2	1	.....	.....	5	.....	.....	.....	.....	.....	
Kasaly	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Bobrof.
Tashkend	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Michelson.
Barnaul	.....	.....	30.68	779.2	—12.3	—24.6	81	Calm	0	0	.....	.....	0	.....	.....	.....	.....	.....	Meteorological Obs.
Yeniseisk	.....	.....	30.39	772.0	— 2.2	—19.0	70	SE	4	2	.....	.....	0	.....	.....	.....	.....	.....	Marks.
Irkutsk	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Usolzof.
Peking, (China)	.....	.....	30.76	781.2	15.4	— 9.2	29	NNW	20	9	.....	.....	0	.....	.....	.....	.....	.....	Physical Observatory.
Nertchinsk	27.95	710.0	30.42	772.6	—31.4	—35.2	96	Calm	0	0	.....	.....	0	.....	.....	.....	.....	.....	Meteorological Obs.
Vladivostock	.....	.....	30.04	763.0	29.7	— 1.3	98	NW	9	4	.....	.....	10	.....	.....	.....	.....	Snowing.....	
Nikolaievsk, on the Amoor	.....	.....	.....	.....	6.4	—14.2	.....	Calm	0	0	.....	.....	10	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols; they omit the rain-fall. The elevation of Tiflis is 409 meters, or 1,341.8 feet; Ekaterinburg, 306.4? m., or 1,005.2? ft.; Tashkend, 494.2? m., or 1,621.3? ft.; Irkutsk, 392 m., or 1,286 ft.; Nertchinsk, 592.0? m., or 1,942.2? ft.

SPANISH SERIES.

Furnished by the cooperation of Antonio Aguilar, Director of the Royal Observatory at Madrid, and of Don Cecilio Pujazon, Captain R. N. Director of the Naval Observatory at San Fernando.

Madrid	.....	.....	30.19	766.8	51.8	10.7	77	SW	13.4	6.00	.....	0	5	.....	.....	0.114	2.9	Cloudy.....	Royal Observatory.
San Fernando	.....	.....	30.32	770.2	58.3	14.6	88	NW	7.2	3.2	.....	0	10	.....	SE	0.020	0.5	.....	Naval Observatory.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

Note.—The originals give the weather in general terms, as published; rain-fall for San Fernando from preceding to following midnight; wind-velocity for Madrid in kilometers per hour.

SWEDISH SERIES.

Furnished by the coöperation of Professor R. Rubenson, Director of the Royal Swedish Meteorological Institute, at Stockholm, and of Dr. H. H. Hildebrandsson, Chief of the Meteorological Division of the Upsala Observatory.

Haparanda	.....	.....	30.03	762.7	— 1.1	—18.4	100	Calm	.....	.....	0	.....	10	.....	.....	0	0	Foggy	
Umea	.....	.....	30.16	766.1	10.0	—12.2	100	Calm	.....	.....	0	.....	0	.....	.....	0	0	.....	
Hernosand	.....	.....	30.22	767.5	10.6	—11.9	96	N	.....	.....	2	.....	5	.....	.....	0	0	.....	
Stockholm	.....	.....	30.24	768.2	10.0	—12.2	85	Calm	.....	.....	0	.....	0	.....	.....	0	0	.....	
Wisby	.....	.....	30.24	768.2	27.0	— 2.8	74	E	.....	.....	4	.....	0	.....	.....	0	0	.....	
Sub-Series.																			
Upsala	.....	.....	30.27	768.8	1.9	—16.7	100	W	0	0	.....	.....	0	.....	.....	0.002	0.04	.....	Dr. Hildebrandsson.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

Note.—The originals give the wind-force by the scale 0 to 6, and Upsala also velocity in meters per second; occasionally, the weather by the Vienna symbols, or in general terms; no distinction between the amount of upper and lower clouds. The rain-fall is measured at 8 a. m., local time.

SWISS SERIES.

Furnished by the coöperation of Professor R. Wolf, Director of the Observatory at Zurich, and of Professor E. Plantamour, Director of the Observatory at Geneva.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'r 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	OBSERVER.
Geneva	28.51	724.2	29.95	760.6	52.2	11.2	59	SSW	.....	.....	6	.....	10	.....	.....	0	0	Covered	The Observatory.
Zurich	28.26	717.7	29.91	759.6	50.2	10.1	68	W	.....	.....	2	.....	4	.....	.....	0	0	Cloudy.....	The Observatory.

Note.—For Geneva the corresponding departures from the normal values are: Barometer,—3.5 mm; Thermometer, +9.8 cent.; Relative Humidity, —20 per cent.

Note.—The rain-fall is measured at Zurich at 7 a. m. on the following day. The originals give the barometer corrected but not reduced to sea-level; the wind-force by the scale 0 to 4 for Zurich; the amount of cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The elevation of Geneva is 408 meters, or 1,339 feet, and that of Zurich 470 meters, or 1,542 feet.

TURKISH SERIES.

Furnished by the coöperation of A. Coumbary, Effendi, Director of the Central Observatory at Constantinople, and of Professor C. V. A. Van Dyck, Superintendent of the Lee Observatory at Beirut.

Constantinople	.....	.....	29.97	761.2	48.2	9.0	72	SSE	3	1.5	.....	.....	8	.....	N	0	0	.....	
Fao, (Persian Gulf)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Salonica	.....	.....	30.01	762.2	61.0	16.1	.....	S	.....	.....	1	.....	10	.....	.....	.....	.....	.....	
Valona	.....	.....	30.03	762.8	55.9	13.3	.....	NW	.....	.....	1	.....	10	.....	.....	.....	.....	.....	
Varna	.....	.....	30.04	763.0	50.0	10.0	.....	N	.....	.....	2	.....	10	.....	.....	.....	.....	.....	
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y	.....	.....	29.88	758.9	63.7	17.6	69	NE	.....	.....	2	.....	10cs	.....	.....	0.02	0.5	Overcast.....	Prof. C. V. A. Van Dyck.

Note.—The originals give the wind-force by the scale 0 to 7, (except Beirut, by the scale 0 to 12, and Constantinople velocity in meters per second;) the weather in general terms as published; no distinction between upper and lower clouds, and, except Constantinople and Beirut, the amount by the scale 0 to 4. It is assumed that the barometer is reduced to sea-level.

CANADIAN SERIES.

Furnished by the coöperation of Professor G. T. Kingston, Director of the Magnetic Observatory at Toronto, and Superintendent of the Meteorological Office of the Dominion of Canada, and the respective Observers. Those marked with a star (*) are also telegraphed daily to the office of the Chief Signal Officer, U. S. Army.

Bathurst, N. B	.....	.....	29.94	760.5	5.5	—14.7	86	Calm	0	0	.....	.....	10	.....	.....	0	0	.....	Hon. J. Ferguson.
Brockville, Ontario	.....	.....	30.09	764.3	20	— 6.7	.....	SW	4	1.8	.....	Haze	2s	.....	SW	Inap.	Inap.	Fair	W. R. Bigg.
*Chatham, N. B	.....	.....	29.98	761.5	— 2	—18.9	100	NW	3	1.3	.....	0	0	.....	.....	0.04	1.0	Clear.....	G. A. Blair.
Charlottetown, P. E. Island	.....	.....	30.01	762.2	13	—10.6	83	W	3	1.3	.....	.....	10s	.....	.....	0	0	Cloudy.....	H. J. Cundall, C. E.
Cornwall, Ontario	.....	.....	30.06	763.5	21.7	— 5.7	92	SW	.....	.....	1	.....	8s	.....	.....	0	0	Clearing.....	James Smith, M. A.
Dalhousie, N. B	.....	.....	29.83	757.7	.....	.....	.....	NW	.....	.....	1	.....	.....	.....	.....	0.05	1.3	Threatening	H. A. Johnson.
Esquimault, B. C	.....	.....	30.21	767.3	33.1	0.6	92	SW	.....	.....	.....	0	0	.....	.....	0	0	Clear.....	W. H. Bevis.
Fredericton, N. B	.....	.....	30.08	764.0	— 0.7	—18.2	100	Calm	0	0	.....	0	0	.....	.....	0.015	0.38	Clear	Prof. Harrison.
*Fort Garry, Manitoba	.....	.....	30.64	778.2	—34	—36.7	100	NW	5	2.2	.....	0	0	.....	.....	0	0	Clear	James Stewart.
Goderich, Ontario	.....	.....	30.04	763.0	21.6	— 5.8	89	Calm	.....	.....	0	.....	10n	.....	.....	0.05	1.3	Light snow..	H. J. Strang, M. A.
Granton, Ontario	28.87	733.3	30.04	763.0	20.3	— 6.5	.....	S	.....	.....	1	.....	10n	.....	.....	0.100	2.54	Snowing.....	James Grant.
*Halifax, N. S	.....	.....	29.98	761.5	17	— 8.3	95	NW	12	5.4	.....	.....	5cs	.....	.....	0.020	0.51	Cloudy.....	F. Allison, M. A.
Hamilton, Ontario	.....	.....	29.97	761.2	24.2	— 4.3	59	W	.....	.....	1	.....	10n	.....	.....	Inap.	Inap.	Light snow..	G. Dickson.
Heart's Content, N. F	.....	.....	30.03	762.7	20	— 6.7	100	Calm	.....	.....	0	.....	10	.....	.....	0	0	Overcast.....	E. Weedon.
*Kingston, Ontario	.....	.....	30.11	764.8	23	— 5.0	87	W	2	0.9	.....	.....	10s	.....	.....	0.02	0.5	Cloudy.....	S. Woods, M. A
*Montreal, Quebec	.....	.....	30.07	763.8	22	— 5.6	79	SW	12	5.4	.....	.....	10n	.....	.....	0.03	0.8	Cloudy	C. H. McLeod, C. E.
*Ottawa, Ontario	.....	.....	30.04	763.0	21	— 6.1	73	SE	4	1.8	.....	.....	10n	.....	W	0	0	Threatening	J. B. Haney.
*Parry Sound, Ontario	.....	.....	29.94	760.5	24	— 4.4	94	S	10	4.5	.....	.....	10n	.....	S	0.35	8.9	Light snow..	Rev. R. Mosley.
Port Dover, Ontario	.....	.....	30.07	763.8	24	— 4.4	93	S	16	7.2	.....	.....	10n	.....	SW	0.03	0.8	Threatening	H. Morgan.
Port Hastings, N. S	.....	.....	29.94	760.5	21	— 6.1	.....	N	6	2.7	.....	.....	.....	.....	.....	0	0	Fine.....	Peter Grant.
Port Stanley, Ontario	.....	.....	30.08	764.0	24	— 4.4	91	SW	8	3.6	.....	.....	10n	.....	W	0.15	3.8	Light snow..	M. Payne.
*Quebec, Quebec	.....	.....	30.03	762.7	17	— 8.3	83	W	15	6.7	.....	.....	10n	.....	.....	0.20	5.1	Cloudy.....	Capt. Ashe, R. N.
*Rockliffe, Ontario	.....	.....	29.98	761.5	15	— 9.4	89	S	2	0.9	.....	.....	10s	.....	W	Inap.	Inap.	Light snow..	
St. John, N. B	.....	.....	30.11	764.8	9	—12.8	89	N	1	0.4	.....	0	0	.....	.....	0.080	2.03	Clear.....	G. Murdoch, C. E.
*Saugeen, Ontario	.....	.....	29.97	761.2	23	— 5.0	84	SW	7	3.1	.....	.....	10s	.....	.....	0.07	1.8	Light snow..	K. Stewart.
Stayner, Ontario	.....	.....	30.04	763.0	21	— 6.1	87	Calm	0	0	.....	.....	10n	.....	.....	0	0	Cloudy.....	R. J. Cole.
Stratford, Ontario	28.69	728.7	30.06	763.5	19.2	— 7.1	95	SW	8	3.6	.....	.....	10s	.....	.....	.....	.....	Snowy.....	C. J. MacGregor, M. A.
*Sydney, C. B	.....	.....	29.93	760.2	21	— 6.1	90	N	9	4.0	.....	.....	10n	.....	.....	Inap.	Inap.	Light snow..	T. C. Hill.
*Toronto, Ontario	.....	.....	30.08	764.0	25	— 3.9	86	SW	13	5.8	.....	.....	10n	.....	SW	Inap.	Inap.	Cloudy	Magnetic Observatory.
Woodstock, Ontario	.....	.....	30.07	763.8	22.7	— 5.2	100	S	12	5.4	.....	.....	10s	.....	.....	0.41	10.4	Cloudy.....	J. Montgomery.
Sub-Series.																			
St. Johns, Newfoundland	.....	.....	30.10	764.5	25.0	— 3.9	.....	E	.....	.....	.....	.....	10n	.....	.....	0	0	Threatening	John Delany.

Note.—The originals for Brockville, Charlottetown, Port Dover, Port Stanley, Stayner, St. Johns, N. F. and those telegraphed, give the amount of cloudiness by the scale 0 to 4. The elevation of Granton is 1,015 feet, or 309.4 m.; Stratford, 1,182 feet, or 360.3 m.

UNITED STATES SERIES.

Furnished by the coöperation of Bvt. Brig. Gen. Albert J. Myer, Chief Signal Officer, U. S. Army.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Upper. 0—10.	Clouds. Amount. Low'r. 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters	Weather.	Observer.
Albany, N. Y.	.....	.....	30.21	767.3	15	— 9.4	82	Calm	0	0	.....	.....	10s	.....	.....	Inap.	Inap.	Cloudy	
Alpena, Mich.	.....	.....	29.95	760.7	18	— 7.8	100	W	4	1.8	.....	.....	10n	.....	.....	0.02	0.5	Light snow	
Atlantic City, N. J.	.....	.....	30.32	770.1	19	— 7.2	84	Calm	0	0	.....	0	Haze	.....	.....	0.01	0.3	Clear	
Augusta, Ga.	.....	.....	30.36	771.1	29	— 1.7	89	NW	4	1.8	.....	.....	Fog	.....	.....	0	0	Foggy	
Baltimore, Md.	.....	.....	30.31	769.9	24	— 4.4	74	Calm	0	0	.....	Haze	Sm'e	.....	.....	0	0	Smoky	
Barnegat, N. J.	.....	.....	30.32	770.1	15	— 9.4	100	W	2	0.9	.....	8k	0	NW	.....	0.25	6.3	Cloudy	
Bismarck, Dakota	28.67	728.2	30.65	778.5	—22	—30.0	59	NW	2	0.9	.....	8clk	0	NW	.....	0	0	Fair	
Boston, Mass.	.....	.....	30.21	767.3	17.5	— 8.1	84	W	4	1.8	.....	4cs	Haze	.....	.....	0.01	0.3	Fair	
Breckenridge, Minn.	.....	.....	30.50	774.7	—25	—31.7	54	NW	20	8.9	.....	0	0	.....	.....	0	0	Clear	
Buffalo, N. Y.	.....	.....	30.06	763.5	24.0	— 4.4	74	SW	11	4.9	.....	.....	10s	.....	.....	Inap.	Inap.	Cloudy	
Burlington, Vt.	.....	.....	30.14	765.5	24	— 4.4	75	S	5	2.2	.....	.....	10s	.....	.....	0.02	0.5	Cloudy	
Cairo, Ill.	.....	.....	29.90	759.4	46	7.8	76	S	12	5.4	.....	.....	10s	.....	SW	0	0	Cloudy	
Cape Hatteras, N. C.	.....	.....	30.32	770.1	33	0.6	79	N	4	1.8	.....	2clk	0	W	.....	0	0	Fair	
Cape Henry, Va.	.....	.....	30.37	771.4	27	— 2.8	64	SW	2	0.9	.....	2c	0	W	.....	0	0	Clear	
Cape Lookout, N. C.	.....	.....	30.40	772.1	32	0.0	70	NE	8	3.6	.....	2clk	Haze	NE	.....	0	0	Fair	
Cape May, N. J.	.....	.....	30.34	770.6	24	— 4.4	74	NW	2	0.9	.....	0	2s	.....	.....	Inap.	Inap.	Fair	
Charleston, S. C.	.....	.....	30.39	771.9	40	4.4	82	SW	2	0.9	.....	1cs	0	.....	.....	0	0	Clear	
Cheyenne, Wyoming	23.75	603.2	29.69	754.1	5	—15.0	100	N	24	10.7	.....	0	0	.....	.....	Inap.	Inap.	Clear	
Chicago, Ill.	.....	.....	29.80	756.9	31	— 0.6	89	SE	5	2.2	.....	.....	10s	.....	.....	0.26	6.6	Cloudy	
Cincinnati, Ohio	.....	.....	29.92	760.0	34	1.1	90	SE	8	3.6	.....	.....	10ks	.....	SW	0.11	2.8	Cloudy	
Cleveland, Ohio	.....	.....	30.02	762.5	26	— 3.3	88	SE	14	6.3	.....	.....	10s	.....	SE	0.09	2.3	Cloudy	
Corsicana, Tex.	.....	.....	29.85	758.2	62	16.7	83	S	16	7.2	.....	.....	10ks	.....	S	0	0	Cloudy	
Davenport, Iowa	.....	.....	29.81	757.2	28	— 2.2	88	Calm	0	0	.....	.....	10s	.....	.....	0.03	0.8	Cloudy	
Denison, Tex.	.....	.....	29.79	756.7	58	14.4	81	S	24	10.7	.....	8cs	0	S	.....	0	0	Cloudy	
Denver, Col.	24.58	624.3	29.80	756.9	21	— 6.1	85	NE	8	3.6	.....	.....	10n	.....	.....	0.20	5.1	Light snow	
Detroit, Mich.	.....	.....	29.95	760.7	20	— 6.7	85	SE	2	0.9	.....	.....	10n	.....	.....	0.10	2.5	Light snow	
Dodge City, Kan.	27.20	690.9	29.57	751.1	25	— 3.9	88	N	14	6.3	.....	.....	10s	.....	N	0	0	Cloudy	
Dubuque, Iowa	.....	.....	29.89	759.2	19	— 7.2	84	N	1	0.4	.....	.....	10n	.....	.....	0.20	5.1	Light snow	
Duluth, Minn.	.....	.....	30.33	770.4	— 7	—21.7	80	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Eastport, Me.	.....	.....	30.06	763.5	17	— 8.3	83	W	3	1.3	.....	2c	5s	W	W	0.06	1.5	Fair	
Erie, Pa.	.....	.....	30.07	763.8	26	— 3.3	88	S	12	5.4	.....	.....	10n	.....	.....	Inap.	Inap.	Light snow	
Escanaba, Mich.	.....	.....	30.03	762.7	9	—12.8	67	NW	12	5.4	.....	.....	10s	.....	.....	0	0	Cloudy	
Fort Gibson, Indian Ter.	.....	.....	29.64	752.8	67	13.9	75	S	17	7.6	.....	0	5s	SW	0	0	0	Fair	
Ft. St. Michael, Alaska	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Fort Sill, Indian Ter.	28.54	724.9	29.66	753.4	42	5.6	48	S	6	2.7	.....	0	0	.....	.....	0	0	Clear	
Fort Sully, Dakota	28.70	729.0	30.65	778.5	—10	—23.3	77	NW	8	3.6	.....	.....	10s	.....	.....	0.14	3.6	Cloudy	
Florence, Arizona	28.37	720.6	29.91	759.7	44	6.7	.....	W	.....	.....	.....	.....	10s	.....	W	0	0	Cloudy	
Galveston, Tex.	.....	.....	30.03	762.7	68	14.4	93	S	10	4.5	.....	.....	10s	.....	S	0	0	Cloudy	
Grand Haven, Mich.	.....	.....	29.88	758.9	26	— 3.3	94	SE	4	1.8	.....	.....	10n	.....	.....	0.07	1.8	Light snow	
Indianapolis, Ind.	.....	.....	29.87	758.7	34	1.1	79	SE	7	3.1	.....	.....	10s	.....	.....	0.02	0.5	Threatening	
Indianola, Tex.	.....	.....	29.99	761.7	64	17.8	89	S	11	4.9	.....	.....	10s	.....	S	0	0	Cloudy	
Jacksonville, Fla.	.....	.....	30.33	770.4	40	4.4	91	NE	4	1.8	.....	0	Fog	.....	.....	0	0	Foggy	
Keokuk, Iowa	.....	.....	29.70	754.4	27	— 2.8	88	SE	4	1.8	.....	.....	10s	.....	SE	0	0	Cloudy	
Key West, Fla.	.....	.....	30.23	767.8	65	18.3	90	NE	12	5.4	.....	5cs	0	.....	.....	0	0	Fair	
Kittyhawk, N. C.	.....	.....	30.42	772.7	27	— 2.8	77	N	4	1.8	.....	0	2s	.....	.....	0.02	0.5	Fair	
Knoxville, Tenn.	.....	.....	30.30	769.6	18	— 7.8	84	N	2	0.9	.....	1c	0	SW	.....	0.10	2.5	Clear	
La Crosse, Wis.	.....	.....	29.87	758.7	10	—12.2	100	N	10	4.5	.....	.....	10n	.....	N	0.09	2.3	Light snow	
Leavenworth, Kan.	.....	.....	29.69	754.1	26	— 3.3	88	S	6	2.7	.....	0	5s	.....	SW	0	0	Fair	
Louisville, Ky.	.....	.....	29.97	761.2	38	3.3	81	S	10	4.5	.....	.....	10s	.....	SW	0.05	1.3	Cloudy	
Lynchburg, Va.	.....	.....	30.35	770.9	18	— 7.8	83	Calm	0	0	.....	10c	0	W	.....	Inap.	Inap.	Cloudy	
Malone, N. Y.	.....	.....	30.03	762.7	28	— 2.2	78	SW	10	4.5	.....	.....	10s	.....	SW	0.01	0.3	Cloudy	
Marquette, Mich.	.....	.....	30.06	763.5	7	—13.9	77	NW	20	8.9	.....	.....	10s	.....	.....	0	0	Cloudy	
Memphis, Tenn.	.....	.....	29.98	761.5	47	8.3	85	S	8	3.6	.....	.....	10s	.....	SW	Inap	Inap.	Cloudy	
Milwaukee, Wis.	.....	.....	29.91	759.7	23	— 5.0	94	NE	12	5.4	.....	.....	10n	.....	.....	0.29	7.4	Light snow	
Mobile, Ala.	.....	.....	30.22	767.6	50	10.0	86	S	2	0.9	.....	0k	5s	SW	SW	0	0	Cloudy	
Montgomery, Ala.	.....	.....	30.30	769.6	35	1.7	80	SE	2	0.9	.....	0	Sm'e	.....	.....	0	0	Clear	
Morgantown, W. Va.	29.06	738.1	30.18	766.6	27	— 2.8	77	Calm	0	0	.....	.....	10s	.....	.....	0.01	0.3	Cloudy	
Mt. Washington, N. H.	23.43	595.1	29.79	756.7	— 1	—18.3	100	W	20	8.9	.....	.....	Fog	.....	.....	0	0	Foggy	
Nashville, Tenn.	.....	.....	30.09	764.3	44	6.7	67	S	8	3.6	.....	.....	10s	.....	SW	0.01	0.3	Cloudy	
New Haven, Conn.	.....	.....	30.30	769.6	22	— 5.6	60	NW	2	0.9	.....	Haz	10s	.....	.....	0.03	0.8	Cloudy	
New London, Conn.	.....	.....	30.26	768.6	20	— 6.7	70	W	4	1.8	.....	2cs	Sm'e	W	.....	0	0	Fair	
New Orleans, La.	.....	.....	30.10	766.1	60	10.0	89	S	2	0.9	.....	10s	Fog	SW	.....	0	0	Cloudy	
Newport, R. I.	.....	.....	30.24	768.1	22	— 5.6	85	W	7	3.1	.....	0	1s	.....	W	Inap	Inap.	Clear	
New York, N. Y.	.....	.....	30.31	769.9	19	— 7.2	54	W	9	4.0	.....	5cs	Sm'e	SW	.....	0.11	2.8	Fair	
Norfolk, Va.	.....	.....	30.38	771.6	27.5	— 2.5	72	SE	2	0.9	.....	2c	Fog	.....	.....	0	0	Fair	
North Platte, Neb.	27.01	686.0	29.80	756.9	7	—13.9	100	NE	28	12.5	.....	.....	10s	.....	.....	0.02	0.5	Cloudy	
Omaha, Neb.	28.67	728.2	29.79	756.7	22	— 5.6	72	N	16	7.2	.....	.....	10s	.....	.....	0.05	1.3	Cloudy	
Oswego, N. Y.	.....	.....	30.15	765.8	27	— 2.8	77	S	4	1.8	.....	Haz	2s	W	W	Inap	Inap.	Cloudy	
Pembina, Dakota	.....	.....	30.63	778.0	—32	—35.6	100	NW	3	1.3	.....	0	0	.....	.....	0	0	Clear	
Philadelphia, Pa.	.....	.....	30.32	770.1	25	— 3.9	75	W	4	1.8	.....	1c	Haze	W	.....	0.01	0.3	Clear	
Pike's Peak, Col.	17.36	440.9	29.57	751.1	6	—14.4	75	NW	13	5.8	.....	.....	10s	.....	.....	0.17	4.3	Cloudy	
Pittsburgh, Pa.	.....	.....	30.15	765.8	28	— 2.2	88	S	4	1.8	.....	.....	10s	.....	S	Inap.	Inap.	Cloudy	
Port Huron, Mich.	.....	.....	29.99	761.7	23	— 5.0	80	S	6	2.7	.....	.....	10n	.....	.....	0.03	0.8	Light snow	
Portland, Me.	.....	.....	30.16	766.1	11	—11.7	79	Calm	0	0	.....	0	Haze	.....	.....	0.12	3.0	Hazy	
Portland, Oregon	.....	.....	30.24	768.1	37	2.8	90	S	3	1.3	.....	0	0	.....	.....	0.03	0.8	Clear	
Punta Rassa, Fla.	.....	.....	30.28	769.1	58.5	14.7	84	NE	6	2.7	.....	5c	0	SW	.....	0	0	Fair	
Rochester, N. Y.	.....	.....	30.10	764.5	24	— 4.4	74	SW	5	2.2	.....	.....	10s	.....	W	Inap	Inap.	Cloudy	
Salt Lake City, Utah	25.44	646.2	29.77	756.1	27	— 2.8	77	E	4	1.8	.....	0	5s	.....	.....	0.05	1.3	Fair	
Sandy Hook, N. J.	.....	.....	30.27	768.8	22	— 5.6	86	W	5	2.2	.....	2clk	0	SW	.....	0.06	1.5	Clear	
San Diego, Cal.	.....	.....	29.96	761.0	58	14.4	70	SE	4	1.8	.....	.....	10s	.....	SE	0	0	Cloudy	
San Francisco, Cal.	.....	.....	30.12	765.0	48	8.9	49	NW	16	7.2	.....	0	0	.....	.....	0	0	Clear	
Santa Fé, N. M.	23.06	585.7	29.60	751.8	30	— 1.1	59	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Savannah, Ga.	.....	.....	30.38	771.6	36	2.2	99	SE	6	2.7	.....	0	Sm'e	.....	.....	0	0	Clear	
Shreveport, La.	.....	.....	29.99	761.7	57	13.9	87	S	7	3.1	.....	.....	10s	.....	SE	0	0	Cloudy	
Smithville, N. C.	.....	.....	30.40	772.1	34	1.1	75	Calm	0	0	.....	1c	0	SW	.....	0	0	Clear	
Springfield, Mass.	.....	.....	30.24	768.1	16	— 8.9	82	Calm	0	0	.....	8clk	Haze	SW	.....	0.04	1.0	Fair	
St. Louis, Mo.	.....	.....	29.77	756.1	40	4.4	91	S	8	3.6	.....	.....	10s	.....	.....	0	0	Cloudy	
St. Marks, Fla.	.....	.....	30.32	770.1	29	— 1.7	95	SE	1	0.4	.....	0	0	.....	.....	0	0	Clear	
St. Paul, Minn.	.....	.....	30.11	764.8	0	—17.8	84	N	19	8.5	.....	.....	10s	.....	.....	0.04	1.0	Cloudy	
St. Paul's Island, Alaska	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Thatcher's Island, Mass.	.....	.....	30.20	767.1	19	— 7.2	54	W	16	7.2	.....	0	0	.....	.....	0	0	Clear	
Toledo, Ohio	.....	.....	29.92	760.0	30	— 1.1	83	SE	9	4.0	.....	.....	10n	.....	SE	0.07	1.8	Light snow	
Tucson, Arizona	27.47	697.7	30.02	762.5	44	6.7	.....	SE	.....	.....	.....	8c	0	W	.....	0	0	Cloudy	
Tybee Island, Ga.	.....	.....	30.36	771.1	38	3.3	90	NE	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Vicksburg, Miss.	.....	.....	30.12	765.0	48.5	9.2	96	SE	12	5.4	.....	.....	10ks	.....	SW	0	0	Cloudy	
Virginia City, M. T.	24.06	611.1	29.54	750.3	7	—13.9	88	NE	21	9.4	.....	.....	10n	.....	W	0.27	6.9	Light snow	
Washington, D. C.	.....	.....	30.34	770.6	15.5	— 9.2	75	W	1	0.4	.....	0	10s,sm'	.....	W	0	0	Smoky	
Wilmington, N. C.	.....	.....	30.40	772.1	30	— 1.1	78	Calm	0	0	.....	2c	Sm'e	W	.....	0	0	Smoky	

UNITED STATES SERIES.—CONTINUED.

STATIONS.	BAROMETER. Corrected for instrum'tal error and temperature. Inches.	BAROMETER. Corrected for instrum'tal error and temperature. Millimeters.	BAROMETER. Reduced to sea-level. Inches.	BAROMETER. Reduced to sea-level. Millimeters.	TEMPERATURE OF THE AIR. Fahrenheit.	TEMPERATURE OF THE AIR. Centigrade.	RELATIVE HUMIDITY. Per cent.	WIND. Direction. From—	WIND. Velocity. Miles per hour.	WIND. Velocity. Meters per second.	WIND. Force. 0—10.	CLOUDS. Amount. Up'er 0—10.	CLOUDS. Amount. Low'r 0—10.	CLOUDS. Direction. Upper. From—	CLOUDS. Direction. Lower. From—	RAIN-FALL OR MELTED SNOW IN THE PAST 24 HOURS. Inches.	RAIN-FALL OR MELTED SNOW IN THE PAST 24 HOURS. Millimeters.	WEATHER.	OBSERVER.
Wood's Holl, Mass.	.....	.....	30.23	767.8	25	— 3.9	75	NW	8	3.6	.....	0	0	.....	.....	0	0	Clear	
Yankton, Dakota	28.76	730.5	30.18	766.6	4	—15.6	87	NW	25	11.2	.....	.....	10n	.....	.....	0.21	5.3	Light snow..	
Yuma, Arizona	.....	.....	29.85	758.2	55	12.8	.....	NE	.....	.....	.....	2c	8s	NE	NE	0	0	Cloudy.....	
SUB-SERIES.																			
Kingston, Jamaica, W. I.	.....	.....	30.28	769.1	76	24.4	76	Calm	0	0	.....	5c	2s	SE	.....	0	0	.....	James Gall.
Navassa, W. I.	.....	.....	.....	.....	79	26.1	.....	E	.....	.....	3	.....	.....	.....	.....	0	0	Clear.....	F. M. Everett.
Clifton, Ja., W. I.	27.26	692.4	30.06	763.5	65	18.3	89	E	2.0	0.9	.....	5c	0	E	.....	0	0	Fine.....	C. Partridge.
Paramaribo, D. Guiana, S.A	.....	.....	30.10	764.5	81	27.8	87	E	.....	.....	2	5k	6ks	E	.....	0	0	½ cloudy....	C. J. Hering.
Batavia, Dutch Guiana, S.A.	30.08	764.0	.....	.....	78.8	26	.....	E	.....	.....	.....	.....	.....	.....	.....	0.295	7.50	½ cloudy....	Dr. H. Groot.
Medellin, Colombia, S. A.	25.26	641.6	.....	.....	65.5	18.6	84	Calm	.....	.....	0	2k	1s	.....	.....	0.09	2.3	Fair	Thomas Herran.
York Factory, B. A.	.....	.....	30.12	765.0	—40.0	—40.0	.....	N	10	4.5	.....	0	0	.....	.....	0	0	Clear.....	J. Fortescue, W. Wood.
Honolulu, Oahu, H. I.	.....	.....	30.00	762.0	69	20.6	94	Calm	.....	.....	0	.....	.....	.....	.....	0.42	10.7	Clear	Daniel Smith.
Makawao, Maui, H. I.	.....	.....	29.89	759.2	65	18.3	78	NE	.....	.....	3	0	2n	.....	.....	0	0	Misty.....	F. L. Clarke.

MARINE SERIES.	True course towards.	Hourly rate in knots.	State of ocean.	Direction of swell from—															
Schooner Addie Fuller, Throgs Neck.	.....	.....	30.23	767.8	22	— 5.6	86	WSW	2	0.9	.....	0	Haze	.....	.....	.....	.....	Hazy.....	Capt. James Jorgensen.

NOTE.—The originals give the amount of cloudiness by the scale 0 to 4, except York Factory, Makawao, Medellin and Paramaribo. The elevation of the barometer at Bismarck is 1,677 feet, or 511.1 meters; Cheyenne, 6,057.3 ft., or 1,846.2 m.; Clifton, about 2,892 ft. or 881.5 m.; Denver, 5,135 ft., or 1,565.2 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Florence, 1,550 (?) ft., or 472.5 (?) m.; Makawao, 2,205 ft., or 672.1 m.; Morgantown, 1,027.9 ft., or 313.3 m.; Medellin, 4,876 ft., or 1,486.2 m.; Mt. Washington, 6,285 ft., or 1,915.6 m.; North Platte, 2,846 ft., or 867.4 m.; Omaha, 1,054.6 ft., or 321.4 m.; Pike's Peak, 14,150.7 ft., or 4,313.1 m.; Salt Lake City, 4,362.2 ft., or 1,329.6 m.; Santa Fe, 6,862.2 (?) ft., or 2,091.6 (?) m.; Tucson, 2,513 (?) ft., or 772.1 (?) m.; Virginia City, 5,480 (?) ft., or 1,670.3 (?) m.; Yankton, 1,278 ft., or 389.5 m. The following constants are added in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Denver, 5.22 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fe, 6.54 in.; Tucson, 2.59 in.; Virginia City, 5.48 in. The elevation of Batavia is about 6 feet; the barometric readings need the addition of 0.2 mm. or 0.01 in. for reduction to sea-level.

UNITED STATES NAVAL SERIES.

By authority of the **SECRETARY OF THE NAVY.**

Furnished by the coöperation of the Navy Department, through Commodore Daniel Ammen, U. S. N., Chief of Bureau of Navigation.

STATIONS AND VESSELS.	True course toward—	Hourly rate in knots.	*Barometer as reported.		Temperature of the Air.		Relative Humidity.	Wind.				Clouds.				Rain-fall or melted snow in the past 24 hours.		State of Ocean.	Direction of swell from—	Weather.	Observer.
								Direction.	Velocity		Force.	Amount.		Direction.							
												Up'er	Low'r	Up'er	Low'r						
			Inches.	Millimeters.	Fahrenheit.	Centigrade.	Per cent.	From—	Miles per hour.	Meters per second.	0—10.	0—10.	0—10.	From—	From—	Inches.	Millimeters.				
Naval Academy, Annapolis, Md.			29.88	758.9	20	— 6.7	70	SW			1		8		S & E	0	0			Cloudy	
Navy Yard, Norfolk, Va.			30.40†	772.1†	23	— 5.0		Calm			0		6k							Hazy	
Navy Yard, Pensacola, Fla.			30.29	769.4	46	7.8		NNE			2		0							Blue sky	
Navy Yard, Portsmouth, N.H.			30.16	766.1	11	—11.7		W			3		0							Clear	
Navy Yard, Wash'gton, D. C.			30.32	770.1	18	— 7.8		W			1		0							Clear	
Adams, Port Royal, S. C.			30.37	771.4	45	7.2	100	E			0–1		0							Hazy	
Ajax Port Royal, S. C.			30.03	762.7	40	4.4		N			1		0							Pleasant	
Alarm, New York, N. Y.			29.21†	741.9†	21	— 6.1		WSW			2		3		E	Blank	Blank			Hazy	
Catskill, Port Royal, S. C.			30.27†	768.8†	41	5.0		NNE			2		0					Smooth		Fair	
Colorado, New York, N. Y.			30.38	771.6	22	— 5.6		W			2		3		E	0.15	3.8			Foggy	
Despatch, Washington, D. C.			30.34†	770.6†	17	— 8.3		Calm			0		9							Hazy	
Dictator, Port Royal, S. C.			30.41	772.4	41	5.0	91	NNE			1		0							Clear	
Essex, Hampton Roads, Va.			30.36	771.1	28	— 2.2	100	ESE			0–1		1							‡D. clouds	
Franklin, New York, N. Y.			30.36	771.1	27.5	— 2.5	100	W			2		3		W			Smooth		‡D. clouds	
Hartford, Hampton Roads, Va.			30.54†	757.7†	30	— 1.1		SSE			1		4		wsw	0	0			Clear	
Huron, Port Royal, S. C.			30.43	772.9	42	5.6	100	NE			1–2		2							Hazy	
Intrepid, New York, N. Y.			30.32	770.1	21	— 6.1		WSW			2		3		E	Blank	Blank			Hazy	
Manhattan, Port Royal, S. C.			30.30†	769.6†	42	5.6		NNE			2		1		E			Smooth		Clear	
Michigan Erie, Pa.			30.07	763.8	26	— 3.3	88	S			3		10							Light snow	
Minnesota, New York, N. Y.			30.39	771.9	19	— 7.2	100	W			3		2		NW	Blank	Blank			Clear	
Monongahela, Baltimore, Md.			30.27	768.6	25	— 3.9		SSW			1		..cs							Cloudy	
New Hampshire, Port Royal, S. C.			30.56	776.2	44	6.7		NE			1		1					Smooth		Hazy	
Ossipee, New Orleans, La.			30.25	768.3	48	8.9		Calm			0		9		N					Misty	
Santee, Annapolis, Md.			29.88†	758.9†	20	— 6.7		SW			1		8		S & E					Cloudy	
St. Louis, League Island, Pa.			30.12	765.0	25	— 3.9		S			1		2		W	0.025	0.63			Fair	
Swatara, New York, N. Y.			30.40	772.1	20	— 6.7		WNW			2		2cs		NW					‡D. clouds	
Tallapoosa, Washington, D. C.			30.20	767.1	16	— 8.9		Calm			0		6		E					‡D. clouds	
Wabash, Boston, Mass.			30.24	768.1	18	— 7.8		W			3		7		E					‡D. clouds	
Wyoming, Washington, D. C.			30.77†	781.5†	17	— 8.3		WSW			1		6							‡D. clouds	

* It is not known that the barometer is corrected for temperature, instrumental error or elevation. † Aneroid Barometer. ‡ Detached clouds.

COLLATED AT THE OFFICE OF THE CHIEF SIGNAL OFFICER OF THE ARMY, WASHINGTON, D. C.

The records which appear in this Bulletin are copied from the regular exchanges of this office, made in each instance in compliance with an especial request, and are published for the uses of the coöperating observers. The barometric readings in the first two columns are reduced to freezing and their respective standards; those in the second two also to mean sea-level. The "weather" is generally published as given.

When the distinction between the upper and lower strata of clouds is not reported, the *kinds* or *types*, viz: cirrus, cumulus, stratus, nimbus, scud, fracto, pallio, haze, fog and smoke, as indicated, respectively, by the letters c, k, s, n, d, f, p, hz., fg. and sm'e, are generally published with the amount in the lower-cloud column. The distinction between the upper and lower strata is carefully made in the United States Series and a portion of the Canadian Series, and the types are indicated by the above letters or their combinations in the proper column.

Albert J. Myer

Brig. Gen. (Bvt. Assg'd.) Chief Signal Officer, U. S. A.

BULLETIN

OF

INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON JANUARY 12, 1877.

7:35 A. M. WASHINGTON mean time.

6:7 A. M. MEXICO mean time.
7:7 A. M. SAN JOSE mean time.
0:6 P. M. LISBON mean time.
0:28 P. M. MADRID mean time.
0:43 P. M. GREENWICH mean time.
0:53 P. M. PARIS mean time.
1:1 P. M. BRUSSELS mean time.
1:4 P. M. UTRECHT mean time.
1:13 P. M. BERNE mean time.
1:26 P. M. CHRISTIANIA mean time.
1:33 P. M. COPENHAGEN mean time.
1:33 P. M. ROME mean time.
1:37 P. M. BERLIN mean time.
1:49 P. M. VIENNA mean time.
1:55 P. M. STOCKHOLM mean time.
2:18 P. M. ATHENS mean time.
2:39 P. M. CONSTANTINOPLE mean time.
2:44 P. M. ST. PETERSBURG mean time.

ALGERIAN SERIES.

Furnished by the coöperation of General d'Eudeville, Commandant Supérieur du Génie in Algeria.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Nemours			30.28	769.1	63.0	17.7	49	NW			3		5			0	0	Fair	Charnot.
Algiers			30.18	766.5	58.6	14.8		NW			1		7			0.252	6.4	Cloudy	Peter.
La Calle			30.01	762.2	60.1	15.6	75	NW			4		5			0.079	2.0	Fair	Fleury.
Tunis			30.00	762.0	64.4	18.0		W			3		6			0	0	Fair	Jacques.
Sfax																			
Sidda																			
Tebessa			30.23	767.8	50.4	10.2	72	WNW			1		2			0	0	Clear	Millot.
Gerfville			30.03	762.8	55.2	12.9		SW			2		10			0	0	Hidden	Bourgeois.
Laghouat			30.19	766.7	50.7	10 4	16	NW			2		2			0	0	Clear	Lemaillot.
Biskra			30.10	764.5	57.2	14.0	57	W			1		6			0	0	Fair	Guyot.
			30.10	764.5	63.9	17.7	59	NW			5		10			0	0	Hidden	Kuntz.

NOTE.—In the originals the distinction between the amount of upper and lower clouds is apparently not made. The weather is published as given. The rain-fall is measure at 7 a. m., local time.

AUSTRIAN SERIES.

Furnished by the cooperation of Professor Ferdinand Osnaghi, Director of the Imperial and Royal Central Meteorological Institute at Vienna.

Agram			29.64	752.9	45.0	7.2	88	NE			3	10				1.602	40.7	Raining	Prof. Ivan Stozir.
Cracow, I. R. Observatory			29.73	755.1	41.0	5.0	97	NE			1	10				0.012	0.3		Dr. Wierzbiski.
Eperies			29.74	755.3	45.7	7.6	83	Calm			0	10s		N		0.049	1.25		Julius Mikolik.
Gratz	28.54	725.0	29.80	757.0	45.7	7.6	67	NW			3	10				0.197	5.0		Andreas Rospini.
Hermannstadt	28.32	719.2	29.76	755.9	43.2	6.2	85	NW			1	9				0.063	1.60		Prof. Reissenberger.
Kremsmünster	28.30	721 1	29.75	755.6	42.4	5.8	76	WSW			2	10				0.051	1.3		Prof. C. Wagner.
Lemberg			29.75	755.7	36.5	2.7	93	SE			1	10				0	0		Dr. T. Stanecki.
Nyiregyhaza																			Habzsuda Daniel.
Pola																			
Szegedin			29.61	749.6	48.2	9.0	86	NE			4	10nks				1.031	26.17	Foggy	I.R.Hydrographic Of'ce.
Trieste			29.71	754.6	47.8	8.8	83	Calm			0	6				0.079	2.00		Karl Stancel.
Vienna			29.57	751.1	42.8	6.0	90	ENE			2	10				1.299	33.0	Light rain	Prof. V. Farolfi.
			29.72	754 9	46.8	8.2	62	W			2	10				0	0		I. R. Central Met. Obs'y.

NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 7 p. m., local time. The elevation of Gratz is 343.5 meters, or 1,126.9 feet: Hermannstadt, 407.8 meters, or 1,337.9 feet; Kremsmünster, 383.6 meters, or 1,258.5 feet.

BELGIAN SERIES.

Furnished by the cooperation of J. C. Houzeau, Director of the Royal Observatory at Brussels.

Arlon			29.84	757.8	37.8	3.2	91	NW			2	10				0.031	0.8		
Brussels			29.80	756.8	41 9	5.5	86	WNW			1	10				0.00	0.15	Covered	Royal Observatory.
Furnes			29.75	755.7	42.3	5.7	80	NW			2	7		WNW		0.154	3.9		
Museyck			29.75	755.6	34.2	1.2	95	WSW			3	10				0.118	3.0		

NOTE.—In the originals, the weather is occasionally given in general notes.

BRITISH SERIES

Furnished by the coöperation of Robert H. Scott, Esq., Director of the Meteorological Office, London, Alexander Buchan, Secretary of the Scottish Meteorological Society, Edinburgh, and the respective Observers.

STATIONS.	Barometer: Corrected for instrumental error and temperature. Inches.	Barometer: Corrected for instrumental error and temperature. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Upper. 0—10.	Clouds. Amount. Lower. 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Aberdeen			29.83	757.7	35.6	2.0		SSW	6	2.7			9			0.030	0.76	Misty	William Boswell.
Ardrossan			29.78	756.4	35	1.7		ENE			3		7					Misty	William McNeil.
Armagh, Observatory			29.91	759.7	40.2	4.6		WNW	12	5.4			6					*D. clouds	S. Call, for Dr. Robinson.
Birr Castle, (Parsonstown)			29.98	761.5	40.2	4.6		WNW			2		0					Blue sky	J. Dreyer.
Bradford			29.82	757.4	36.2	2.3		E			1		9			0	0		J. McLandsborough.
Bridgetown, (Barbados)			30.02	762.5	80	26.7		NE			2		5					*D. clouds	Sergt. J. F. Halanen, A.
Cambridge, Observatory			29.83	757.7	40.0	4.4		NW			1		7ck					*D. clouds	H. Todd. [H.C
Cardington			29.85	758.2	36.0	2.2		W			1		3					*D. clouds	John McLaren.
Carlisle																			T. Bell, for J. Cartmell
Chatham, School M. E			29.85	758.2	37.5	3.1		NE			0		4					*D. clouds	Maj. C. N. Martin, R.E
Dartmoor	28.37	720.6	29.90	759.4	38.0	3.3		NW			5		8					Showery	R. E. Power.
Davos Platz, (Switzerland)	24.56	623.8			30.2	— 1.0	75	S			1		10			0.01	0.3	Snowing	Francis Redford, M. A.
Donaghadee			29.82	757.4	41	5.0		NNW			4		5					*D. clouds	J. Mac Gowan.
Dover			29.82	757.4	38	3.3		NW			3		4					½ clouded	J. Costello.
Eccles, (near Manchester)			29.80	756.9	38.8	3.8		SE	1..	0.5			10					Misty	Thomas Mackereth.
Falmouth, Observatory			29.90	759.4	44.9	7.2		NW			5		3					Squally	The Staff.
Fort Napier, (Natal)	27.70	703.6	29.94	760.5	63.3	17.4		SE			2		10					Drizzling	Pvt. G. Salmon, A. H. C
Free Town, (Sierra Leone)			29.90	759.4	85.0	29.4		Calm			0		4					*D. clouds	
Galway, Queen's College			29.96	761.0	41	5.0		NW			2		3					*D. clouds	Prof. A. H. Curtis.
Gibraltar, (Mediterranean)			30.31	769.9	57.0	13.9		NW			3		1					Blue sky	Corpl. C. Aitken, A. H.C.
Glasgow, Observatory			29.80	756.9	32.8	0.4		NE			1		10					Rain & snow	Lewis Stuart.
Great Yarmouth			29.82	757.4	39	3 9		NW			1		6					Foggy	G. T. Watson.
Greenwich, Royal Obs'y			29.85	758.2	32.0	0.0		WSW			1		10			Blank	Blank	Hazy	The Staff, for G. B. Airy.
Guernsey			29.74	755.4	47	8.3		SSW			1		8					Raining	Dr. S. E. Hoskins.
Helston			29.92	760.0	45	7.9		NW			6		4c			0.33	8.4	Fine	M. P. Moyle.
Holyhead			29.82	757.4	44	6.7		NNW			6		3					*D. clouds	John Tilston.
Kew, Observatory			29.86	758.4	36.7	2.6		WNW	3	1.3								Misty	The Staff.
Kingstown			29.87	758.7	42	5.6		WNW			5		1					Blue sky	George Mitchell.
Leicester Museum			29.84	757.9	39.0	3.9		Calm			0		5					*D. clouds	Wm. J. Harrison, F.G.S.
Malta, (Mediterranean)			29.92	760.0	62.3	16.8		SW			2		4k					*D. clouds	Corp'l. P. Bravis, A.H.C.
Nairn			29.77	756.1	35	1.7		E			1		8					¾ clouded	W. D. Penny.
Nassau, (Bahamas)			30.23	767.8	73.8	23.2		NE			3		3					*D. clouds	Surg. Maj. Henry.
Nottingham, Observatory			29.86	758.4	33.7	2.6		SSE			1		4c, c		W	0	0	*D. clouds	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			29.84	757.9	34.1	1.2		SE			1		10					Foggy	Rev. Stephen Whitty.
Oxford, Radcliffe Obs'y			29.84	757.9	37	2.8		Calm			0		10					Overcast	J. Lucas.
Plymouth			29.84	757.9	42.3	5.7		NW			2		10					Raining	John Merrifield.
Roche's Point			30.00	762.0	42	5.6		NNW			4		2					Fine	W. Kennedy.
Saint Ann's Head			29.87	758.7	43	6.1		NNW			4		5					*D. clouds	John C. Walker.
Saint Helier, (Jersey)			29.77	756.1	47.0	8.3		S			3		10					Overcast	A. P. Amy.
Sandwick Manse, (Orkneys)			29.78	756.4	35	1.7		Calm?	2?	0.9			10					Misty	Rev. C. Clouston, LL. D.
Scarborough																			F. Shaw.
Scutari Cemetery, (Turkey)			29.85	758.2	51.0	10.6		SW			1		19					Overcast	Sergt. W. H. Lyne.
Sheffield			29.83	757.7	36.0	2.2		SE			1		6			0.05	1.42	*D. clouds	W. F. Cooper.
Silloth Rectory			29.81	757.2	34.0	1.4	84	Calm			0		8			0.14	3.60	*D. clouds	Rev. Francis Redford
Stonyhurst, Observatory			29.87	758.7	34.7	1.5		NE			0		10n					Overcast	Rev. S. J. Perry.
Stornoway, Lews C., (Hebr.)			29.77	756.1	38	3.3		NW			5		10					Squally	John Smith.
Stratfield Turgiss			29.85	758.2	35.0	2.0		SE			1		6					Foggy	Rev. Charles H. Griffith
Thurso			29.74	755.4	35	1.7		S			2		10					Snowing	John Trotter.
Truro, Royal Institution			29.82	757.4	47	8.3		N			7		5					*D. clouds	W. Newcombe.
Valencia, Observatory			30.06	763.5	44.5	6.8		NNW	12	5.4			5					*D. clouds	The Staff.
SUB-SERIES.																			
Calf of Man, (Isle of Man)					46	7.8		NW			4		10			0.20	5.1		Henry Mercer.
Cape Good Hope, Obs'y			30.12	765.0	72.9	22.7	66	S	28	12.5		0	0						The Staff, for E. J. Stone.
Hobart Town, (Tasmania)			29.93	760.2	65.0	18.3	94	S			1	0				0.03	0.8	Clear	Francis Abbott, F.R.A.S.
Leith, Restalrig Park			29.86	758.4	36.8	2.7		W			2	6ck		SW		0	0	Cloudy	Andrew Gibb.
Mauritius, Observatory			30.02	762.5	84.7	29.3	63	NE	16.6	7.2		0	8		E	0	0	*D. clouds	C. Meldrum.
Melbourne, Observatory			30.10	764.5	54.8	12.7	70	SE	6	2.7			4			0	0	Fine	R. L. J. Ellery.
Monach L't-house, (Hebrides)			29.88	758.9	47	8.3		NNW			4	5	3	NW		0.4	10.2		J. Youngclause.
North Unst, (Shetland Is.)			29.84	757.9	37	2.8		S			7	10	10			Blank	Blank		Robert Burnet.

NOTE.—Generally, the originals do not give the relative humidity, rain-fall, or distinction between upper and lower clouds. The originals give the wind direction to 32 points and weather by the Beaufort notation. The originals give the barometer for Aberdeen, Cardington, Galway, Oxford, St. Heller, Sandwick, Scarborough, Stonyhurst, Leith, Monach and North Unst as read off and the cloudiness for Stornoway by the scale 0 to 4. The wind-force is given by the scale 0 to 12 in the official series; 0 to 6 in the sub-series; except in lbs. per square foot for Greenwich and Hobart Town. The rain-fall is measured at Aberdeen at 10 a. m.; Bradford, 9 a. m.; Hobart Town, 7:30 a. m.; Nottingham, 6 p. m.; Mauritius, 9 a. m., local time. The elevation of Dartmoor is 1,400 feet, or 426.7 meters; Davos Platz, 5,105? feet, or 1,556.6? meters; Fort Napier, 2,260 feet, or 676.6 meters. *Detached clouds.

By authority of the MINISTER OF FOREIGN AFFAIRS.

COSTA RICA SERIES.

Furnished by the coöperation of Senor Federico Maison, Director of the Central Office of Statistics and Meteorology.

San José																			

DANISH SERIES.

Furnished by the coöperation of Captain N. Hoffmeyer, Director of the Royal Danish Meteorological Institute at Copenhagen.

Copenhagen			29.92	760.0	30.7	— 0.7	68	ESE			7		7						
Fanöe			29.86	758.4	31.6	— 0.2	92	ENE			6		10						
Godthaab, (Greenland)			28.72	729.6	13.8	—10.1	97	SSE			6		10					Snowing	
Stykkisholm, (Iceland)			29.28	743.6	28.9	— 1.7	94	SW			8		10					Snowing	
Thorshavn, (Faröe)			29.70	754.4	39.2	4.0	63	NW			4		10						
Vestervig			29.95	760.8	27.7	— 2.4	79	NE			6		6						

NOTE.—The originals give the wind-force by the scale 0 to 6; occasionally, weather by Vienna symbols; no distinction between the amount of upper and lower clouds.

FRENCH SERIES.

Furnished by the co-operation of His Excellency, U. J. Le Verrier, Director of the Paris Observatory, and the respective Observers.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Alençon	.....	.....	29.88	759.0	50.0	10	97	SW	.....	.....	2	.....	10	.....	.....	0.134	3.4	Covered	Normal School.
Amiens	.....	.....	29.87	758.7	42.8	6.0	84	SW	.....	.....	2	.....	10	.....	.....	0.362	9.2	Covered	Normal School.
Avignon	.....	.....	29.94	760.5	52.2	11.2	68	N	.....	.....	2	.....	5	.....	NW	0.020	0.5	Cloudy.....	Normal School.
Bar-sur-Seine	.....	.....	29.90	759.4	43.7	6.5	77	N	.....	.....	2	.....	8k	.....	NNW	0.614	15.6	Very cloudy	C. Saillard.
Beaumette, (near Angers)	.....	.....	29.81	757.2	48.7	9.3	94	SW	4.3	1.9	.....	.....	.....	.....	SW	0.079	2.0	.....	Beaumette Observatory.
Beauvais	.....	.....	29.87	758.8	43.7	6.5	74	NW	.....	.....	2	.....	8	.....	NW	0.148	3.75	Very cloudy	Normal School.
Besançon	.....	.....	29.94	760.5	41.5	5.3	78	SW	.....	.....	4	.....	8	.....	S	0.594	15.1	Very cloudy	Normal School.
Bourg en Bresse	.....	.....	30.04	763.1	43.3	6.3	77	SW	.....	.....	1	.....	5kn	.....	W	0	0	Cloudy.....	Normal School.
Bourges	.....	.....	29.88	759.0	46.4	8	86	SW	.....	.....	2	.....	5	.....	SW	0.138	3.5	Cloudy.. ..	Normal School.
Brest	.....	.....	29.85	758.3	47.3	8.5	80	NNW	.....	.....	5	.....	2	.....	NNW	0.089	2.25	Squally.....	Naval Observatory.
Carcassonne	.....	.....	30.01	762.3	54.5	12.5	71	E	.....	.....	2	.....	10	.....	W	0.138	3.5	Covered	Normal School.
Caen	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Chartres	.....	.....	29.88	759.0	41.9	5.5	95	SW	.....	.....	2	.....	10	.....	.....	0	0	Covered	Normal School.
Châlons-sur-Marne	.....	.....	29.87	758.7	41.4	5.2	75	W	.....	.....	3	.....	10n	.....	E	0.264	6.7	Covered	Normal School.
Clermont	.....	.....	29.92	760.0	46.9	8.3	65	W	.....	.....	3	.....	8	.....	W	0.035	0.9	Very cloudy	Puy de Dome Obs'y.
Commercy	.....	.....	29.86	758.4	38.8	3.8	91	W	.....	.....	2	.....	10	.....	.....	0.720	18.3	Covered	Normal School.
Commune de Gréasque*	.....	.....	29.90	759.4	47.3	8.5	53	NW	.....	.....	6	.....	2	.....	NW	0.087	2.2	.....	M. Kina.
Grenoble	.....	.....	29.98	761.5	45.5	7.5	70	ENE	.....	.....	2	.....	5kn	.....	SW	0.59	15.	Cloudy.....	Normal School.
La Roche-sur-Yon	.....	.....	29.88	759.0	49.6	9.8	95	W	.....	.....	2	.....	2	.....	E	0.091	2.3	Slightly cl'dy	Normal School.
Le Mans	.....	.....	29.85	758.1	44.6	7	94	SW	.....	.....	3	.....	8	.....	SW	0.35	9.	Very cloudy	Normal School.
Lons-Le-Saulnier	.....	.....	29.95	760.8	43.3	6.3	70	E	.....	.....	1	.....	10	.....	NE	0.488	12.40	Raining.....	Normal School.
Lorient	.....	.....	29.89	759.3	49 3	9.6	67	NW	.....	.....	4	.....	5	.....	NW	0.122	3.1	Cloudy.....	Naval Observatory.
Mâcon	.....	.....	30.01	762.3	42.3	5.7	85	NW	.....	.....	4	.....	5	.....	NW	0.06	2.	Cloudy.....	Normal School.
Metz	.....	.....	29.87	758.8	39.2	4.0	96	WNW	.....	.....	3	.....	10	.....	.....	0.335	8.5	.....	M. Schuster.
Mirecourt	.....	.....	29.82	757.3	38.3	3.5	83	W	.....	.....	2	.....	10	.....	NE	0	0	Covered	Normal School.
Nismes	.....	.....	29.93	760.2	55.4	13	75	W	.....	.....	2	.....	0	.....	.....	0	0	Clear	Normal School.
Orleans	.....	.....	29.83	757.6	46.8	8.2	94	SSW	.....	.....	1	.....	8	.....	SSW	0.098	2.5	Very cloudy	Normal School.
Paris, Observatory	.....	.....	29.88	758.9	43.3	6.3	82	S	.....	.....	1	.....	10k	.....	WSW	0.075	1.90	Light fog.....	National Observatory.
Parthenay	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Privas	.....	.....	29.98	761.6	48.9	9.4	.....	NNW	.....	.....	2	.....	5	.....	NNW	0	0	Cloudy.....	Normal School.
Rochefort, Observatory	.....	.....	29.93	760.3	50.7	10.4	87	SW	.....	.....	3	.....	10	.....	NE	0.157	4.0	Rainy.....	Naval Observatory.
Rouen	.....	.....	29.79	756.7	45.0	7.2	73	W	.....	.....	2	.....	2	.....	W	0.175	4.4	Slightly cl'dy	Normal School.
Saint Lo	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Tarbes	28.94	735.0	30.02	762.6	52.7	11.5	93	W	.....	.....	4	.....	10	.....	.....	0	0	Covered	Normal School.
Villefranche	.....	.....	29.99	761.8	47.3	8.5	96	SE	.....	.....	1	.....	10	.....	NW	0.04	1.	Covered	Normal School.
Sub-Series.																			
Fort de France, Martinique	.....	.....	29.93	760.3	73.8	23.2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	L'Abbé Marchési.
Marseilles	.....	.....	29.87	758.7	51.1	10.6	56	NW	.....	.....	3	.....	5	.....	.....	0.008	0.2	Partly cl'dy.	Marseilles Observatory.
Mont-Louis	24.77	629.1	30.08	764.1	37.0	2.8	46	SW	9.3	4.17	.....	.....	5	.....	WNW	0.177	4.5	.....	—. Falguère.
Montsouris, Paris	.....	.....	29.86	758.5	42.6	5.9	79	SSW	.....	.....	2	.....	10	.....	WSW	0.07	1.8	.....	Montsouris Observatory
Perpignan	.....	.....	29.97	761.3	52.5	11.4	50	NW	22.4	10.00	.....	.....	7	.....	NW	0	0	.....	Dr. Flaes.
Pic du Midi, (Summit,) H. P.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. Baylac.
Pic du Midi, (Plantade,) H. P.	22.29	566.2	.....	.....	21.2	— 6.0	.....	S	.....	.....	3	.....	9	.....	.....	1.35	34.3	Snowy.....	General de Nansouty.
Saint Maur, (near Paris)	.....	.....	29.87	758.7	42.4	5.8	83	S	.....	.....	1	...	10	.....	.....	0.134	3.4	Cloudy	E. Renou.
Toulouse	.....	.....	30.05	763.2	46.4	8.0	90	WSW	.....	.....	1	.....	10	.....	.....	0.169	4.3	Light rain....	Toulouse Observatory.
Tours	.....	.....	29.78	756.5	46.0	7.8	91	WSW	.....	.....	2	.....	10	.....	WSW	0.024	0.6	.....	C. Marquet.
†Versailles, (near Paris)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.087	2.21	.....	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai)	.....	.....	30.58	776.7	34.3	1.3	96	N	11.2	5.00	.....	.....	10	.....	.....	0.059	1.5	Rainy.....	Marc Dechevrens, S. J.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—Generally, the originals give the wind-force by the scale 0 to 7; no distinction between upper and lower clouds, and, in the official series, the amount by the scale 0 to 4; the rain-fall as measured at 7, 8 or 9 a. m., local time; at Clermont, 9 a. m. of the following day; the weather in general terms as published. The elevation of Clermont is 388 meters, or 1,272.9 feet; Commune de Gréasque, 322 meters, or 1,056.4 feet; Tarbes, 308 meters, or 1,010 feet; Mont-Louis, 1,586.40 meters, or 5,204.8 feet; Pic du Midi, (Summit,) 2,877 meters, or 9,439.1 feet; Pic du Midi, (Plantade,) 2,366 meters, or 7,762.6 feet. In correcting the Mont-Louis barometric observations for altitude, the constant 135. millimeters has been added. *Bouches-du-Rhône †Observation not simultaneous.

GERMAN SERIES.

Furnished by the coöperation of Professor Dr. G. Neumayer, Director of the German Naval Observatory, Hamburg.

Bamberg	.....	.....	29.65	753.1	41.4	5.2	77	W	.....	.....	3	.....	10	SW	.....	0.118	3.0	.....	Prof. T. Hoh.
Berlin	.....	.....	29.77	756.1	32.7	0.4	83	SE	.....	.....	2	.....	10	.....	.....	0.130	3.3	.....	Prof. Arndt.
Breslau	.....	.....	29.72	755.0	39.9	4.4	96	ESE	.....	.....	1	.....	10	.....	.....	0.06	1.6	Dense fog...	Royal University Obs'y.
Carlsruhe	.....	.....	29.77	756.1	39.2	4.0	93	SW	.....	.....	10	.....	10	.....	.....	0.197	5.0	Raining.....	A. Senz.
Cassel	.....	.....	29.73	755.1	43.2	6.2	91	S	.....	.....	3	.....	8	S	.....	0.319	8.1	.....	Dr. H. Möhl.
Crefeld	.....	.....	29.73	755.1	37.0	2.8	96	NW	.....	.....	4	.....	10	.....	.....	0.24	6.	Foggy	Director Lose.
Emden	.....	.....	29.89	759.1	34.2	1.2	95	ENE	.....	.....	2	.....	10	.....	.....	0.059	1.5	.....	Prof. Prestel.
Frankfort on the Main	.....	.....	29.73	755.2	41.7	5.4	85	W	.....	.....	1	.....	10	.....	.....	0.579	14.7	.....	Physical Society.
Friedrichshafen	28.41	721.5	29.87	758.7	40.6	4.8	78	WSW	.....	.....	8	.....	10	.....	.....	0	0	.....	M. Wilhelm.
Hamburg	.....	.....	29.77	756.2	33.1	0.6	90	ENE	.....	.....	4	.....	10	.....	.....	0.102	2.6	Covered	Captain F. Hegemann.
Kiel	.....	.....	29.81	757.2	33.1	0.6	87	E	.....	.....	4	.....	10	.....	.....	0.020	0.5	.....	Prof. G. Karsten.
Königsberg, (Prussia)	.....	.....	29.95	760.6	23.2	— 4.9	89	E	.....	.....	5	.....	10	.....	.....	0.051	1.3	Snowing.....	Prof. E. Luther.
Köslin	.....	.....	29.85	758.3	30.0	— 1.1	.....	E	.....	.....	2	.....	10	.....	.....	0	0	.....	H. Müller.
Leipsic	.....	.....	29.69	754.2	45.1	7.3	85	WSW	.....	.....	2	.....	9	SW	.....	0.197	5.0	.....	Prof. Bruhns.
Memel	.....	.....	30.02	762.5	23.7	— 4.6	54	E	.....	.....	4	.....	10ks	.....	.....	.....	.....	Light snow..	Reinbrecht & Skalweit.
Münster	.....	.....	29.69	754.2	41.0	5.0	94	N	.....	.....	1	.....	10	.....	.....	0.449	11.4	.....	Prof. E. Heis.
Neufahrwasser	.....	.....	29.89	759.2	27.9	— 2.3	83	ESE	.....	.....	2	.....	9	.....	.....	0.024	0.6	.....	A Lothe.
Posen	.....	.....	29.76	755.9	30.6	— 0.8	100	S	.....	.....	3	.....	10	.....	.....	0.012	0.3	Snowing.....	Dr. Magener.
Strassburg, (in Alsace)	.....	.....	29.83	757.7	41.4	5.2	81	SW	.....	.....	3	.....	10	.....	.....	0.067	1.7	Raining.....	Dr. Schur.
Stuttgart	.....	.....	29.75	755.7	41.5	5.3	74	W	.....	.....	2	.....	10	.....	.....	0.157	4.0	.....	Prof. Schoder.
Thorn	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Dr. Hasenbalg.
Treves, (Trier)	.....	.....	29.71	754.6	42.1	5.6	78	W	.....	.....	6	.....	10	.....	.....	0.035	0.9	Foggy	Prof. Flesch.
Weissenburg, (Bavaria)	28.21	716.4	29.74	755.5	38.7	3.7	83	WSW	.....	.....	4	.....	10	W	.....	0.028	0.7	Light rain...	Dr. von Bebber.
Wustrow, Naval School	.....	.....	29.89	759.1	31.8	— 0.1	90	E	.....	.....	4	.....	10	.....	.....	0	0	.....	E. F. Schütz.
German Naval Series.																			
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—The elevation of Friedrichshafen is 413.4 meters, or 1,356.9 feet; Weissenburg, 431 meters, or 1,414.0 ft. In the originals the distinction between the amount of upper and lower clouds is not made. It is not always certain that the remarks in the weather column refer to the moment of observation.

GREEK SERIES.

Furnished by the coöperation of Professor Dr. J. F. Julius Schmidt, Director of the Royal Observatory at Athens.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Athens			29.85	758.2	58 5	14 7		S										Clear & dusty	

Note.—The originals give the barometer corrected, but not reduced to sea-level; occasionally the kind of clouds; the weather as published. They omit the humidity, wind-force, amount of cloudiness and rain-fall.

ITALIAN SERIES.

Furnished by the cooperation of His Excellency the Minister of Agriculture, Industry and Commerce, and the respective Observers.

Udine			29.61	752.0	48.0	8.9	76	E	0.7	0.3			10			0 02(	0.5	Light rain	Prof. Giovanni Iodig.
Stelvio	21.81	553.9			21.7	— 5.7		NNE			1		4	S		0	0		Signora Ernesta Manfredi.
Valdobbia	21.80	553.6			18.3	— 7.6	80	WSW			8		6	NW		0	0		Ab. Dom. Mongini.
Padua			29.60	751.7	47.7	8.7	82	N	6.9	3.1			10	NE		0.075	1.9	Raining	Prof. Dott. Lorenzoni.
Vicenza			29.62	752.3	47.1	8.5	86	WSW	1.8	0.8			5	N		0.028	0.7	Light rain	Conte Alm. Da Schio.
Verona			29.60	751.8	48.6	9.2	86	E			1		0			0	0		Dott. B. Bertoncelli.
Bergamo	28.29	718.6	29.65	753.1	46.4	8.0	75	SW			4		3			0.071	1.8		Prof Trionfini Carlo.
Domodossola			29.68	753.9	47.8	8.8	53	N			6		3			0	0		Prof. Giuseppe Calza.
Milan			29.68	753.8	52.3	11.3	94	E			1		10			0	0		Ab. Gio. Capelli.
Pavia			29.67	753.7	48.2	9.0	80	W			6		8	SW		0.079	2.0	Raining	Prof. Gio. Cantoni.
Moncalieri			29.72	754.9	44.2	6.8	87	SSE	1.3	0.6			9	SW		0	0		Prof. P. F. Denza.
Mondovi	27.77	705.3	29.75	755.6	41.0	5.0	97	N			2		4	NNW		0	0		Prof. D. C. Bruno.
Porto Maurizio			29.71	754.7	55.4	13.0	65	SW			2		4			0.043	1.1	Light rain	Prof. L. Vassallo.
Genoa			29.67	753.7	54.1	12.3	54	N	3.8	1.7			2	N		0.126	3.2	Raining	Prof. G. M. Garibaldi.
Piacenza			29.67	753.7	47.8	8.8	87	WNW	21.0	9.4			9	WNW		0.181	4.6	Raining	Dott. G. Manzi.
Parma			29.67	753.7	48.6	9.2	84	W			2		8			0.339	8.6	Raining	Prof. P. Pigorini.
Florence			29.63	752.6	48.2	9.0	92	NE			4		10			0.378	9.6	Raining	Cav. F. Meucci.
Leghorn			29.61	752.0	51.6	10.9	73	N	8.1	3.6			9	NNE		0	0		Prof. P. Monte.
Siena	28.37	720.7	29.61	752.2	49.3	9.6	86	SSW	0	0			9	SW		0.822	20.9	Raining	Prof. L. Toscani.
Urbino	28.05	712.5	29.66	753.3	45.3	7.4	97	WSW			2		10			0.866	22.0	Raining	Prof. P. Serpieri.
Pesaro			29.59	751.5	47.3	8.5	96	WNW	19.1	8.6			10	NW		1.195	30.4	Raining	Prof. Luigi Guidi.
Ancona			29.59	751.5	49.1	9.5	81	WSW			2		10			0.406	10.3	Raining	Prof. F. De— Bosis.
Grosseto			29.63	752.6	48.7	9.3	99	WNW			2		10	NW		0.28.	7.3	Raining	Avv. P. Ponticelli.
Rome			29.66	753.4	54.0	12.2	72	W	16.1	7.2			10	W		0.429	10.9	Raining	Prof's. P. Secchi & L. Respighi.
Naples, O. U			29.75	755.6	59.2	15.1	59	W			2		8	SW		0.230	6.0	Raining	Prof. L. Palmieri.
Lecce			29.79	756.6	55.9	13.3	89	SSW	15.0	6.7			10			0.248	6.3	Raining	Prof. C. De—Giorgi.
Cosenza			29.85	758.1	58.6	14.8	69	NE	0	0			10			0.69:	17.6	Raining	Prof. F. D. Conti.
Cagliari																			Prof. A. Pacinotti.
Noto, (Sicily)			29.79	756.7	57.9	14.4	82	ENE			2		9			0	0		Prof. F. Cafiero.
Palermo			29.85	758.2	58.3	14.6	62	W	6.5	2.8			7			0	0		Prof. G. Cacciatore.
Caltanissetta	27.92	709.2	29.9:	759.8	52.7	11.5	71	W			2		8	SW		0	0		Prof. A. Pagani.
Siracusa			29.78	756.5	61.2	16.2	51	WNW			2		10	WNW		0	0		Prof. V. Giuliano.
Sub-Series.																			
Naples, S. R.			29.76	756.0	54.3	12.4	66	WSW	8.7	3.9			6	SW		0.264	6.7		Prof. F. Brioschi

Note.—The originals give the wind-force by the scale 0 to 4, or the velocity in kilometers per hour; generally, no distinction between upper and lower clouds; occasionally the weather by the Vienna symbols. The elevation of Stelvio is 2,543.0 meters, or 8,342.9 feet; Valdobbia, 2,548.0 meters or 8,359.3 feet; Bergamo, 379.6 meters, or 1,245.3 feet; Mondovi, 556 meters, or 1,824.2 feet; Siena, 348.5 meters, or 1,143.3 feet; Urbino, 451 meters, or 1,479.7 feet; Caltanissetta, 570.3 meters, or 1,871.0 feet.

Furnished by the coöperation of the Imperial University of Tokei, Japan.

JAPANESE SERIES.

Tokei			30.06	763.5	33.5	0.8		Calm	0	0			0			0	0		Prof. P. V. Veeder.

Note.—The originals give the amount of cloudiness by the scale 0 to 4 without distinguishing between upper and lower clouds. The rain-fall is measured at 7 a. m., local time.

By authority of the Secretary of Public Works.

MEXICAN SERIES.

Furnished by the coöperation of Senor Mariano Barcena, Director of the Central Meteorological Observatory in the City of Mexico.

Mexico																		Mariano Barcena. Vicente Reyes. Miguel Perez. (Engineers in charge.)	

Note.—The elevation of Mexico is 2,290 meters, or 7,512.9 feet. The rain-fall is measured at 6 a. m., local time.

NETHERLANDS' SERIES.

Furnished by the coöperation of Professor Buys Ballot, Director of the Royal Meteorological Institute of the Netherlands at Utrecht.

Flushing			29.81	757.2	43.2	6.2		NNE			3					0.051	1.3		
Groningen			29.71	754.6	34.7	1.5		NNE			3					0	0		
Helder			29.77	756.1	37.0	2.8		NNE			2					0	0		
Utrecht			29.73	755.2	36.9	2.7	86	NNW			3		10			0	0	Dull	

Note.—The originals give the wind-pressure in kilograms per square meter; for Utrecht, they give the weather as published, from which the amount of cloudiness is taken by the scale 0 to 4, without distinguishing between upper and lower clouds. It is assumed that the barometer readings have been reduced to sea-level.

NORWEGIAN SERIES.

Furnished by the coöperation of Professor H. Mohn, Director of the Royal Norwegian Meteorological Institute at Christiania.

Bergen			30.07	763.8	19.8	— 6.8	78	Calm	0	0			0			0	0		
Brönö			30.10	764.4	24.4	— 4.2	43	S	17.9	8			1			0	0		
Christiania			30.27	768.9	6.4	—14.2	83	NE	2.7	1.2			10			0	0		
Tromsö			29.95	760.7	35.2	1.8	75	SSW	6.7	3			9			0	0		

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols. The cloudiness and weather at Bergen refer to 2h., p. m., local time, instead of 1h., 4 min.

PORTUGUESE SERIES.

Furnished by the coöperation of J. C. de Brito Capello, Director of the Meteorological Observatory of the Infante Don Luiz at Lisbon.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Angra, (Azores)	.....	.....	30.31	769.9	56.3	13.5	82	WSW	9.8	4.4	.....	.....	7	.....	.....	0	0	.....	Dr. J. A. Sampaio.
Campo Major	.....	.....	30.32	770.0	50.5	10.3	74	SW	7.4	3.3	.....	.....	10	WNW	.....	0	0	.....	Dr. A. M. R. dos Santos.
Funchal, (Madeira)	.....	.....	30.43	772.8	60.1	15.6	53	NE	1.8	0.8	.....	.....	2	.....	.....	0	0	.....	Capt. D. A. de Cunha.
Lisbon	.....	.....	30.38	771.7	54.7	12.6	70	WNW	12.5	5.6	.....	.....	9	.....	.....	Inap.	Inap.	.....	The Observatory.
Ponta Delgada, (Azores)	.....	.....	30.41	772.4	59.0	15.0	75	SW	12.5	5.6	.....	.....	10	.....	.....	0.004	0.1	.....	

Note.—The originals give the wind-velocity in kilometers per hour; occasionally, the weather by the Vienna symbols; the amount of cloudiness without distinguishing between upper and lower clouds; the barometer corrected but not reduced to sea-level. The rain-fall at Lisbon is measured at noon, instead of 0 h. 6 m., p. m.

RUSSIAN SERIES.

Furnished by the cooperation of Professor H. Wild, Director of the Imperial Central Physical Observatory of Russia, at St. Petersburg.

Warsaw	.....	.....	29.79	756.6	30.2	— 1.0	96	E	11	5	.....	.....	10	.....	.....	.....	.....	Snowing.....	Astronomical Obs.
Wilna	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Astronomical Obs.
Dorpat	.....	.....	30.37	771.3	12.4	—10.9	94	E	4	2	.....	.....	8	.....	.....	.....	.....	.....	Physical Cabinet.
St. Petersburg	.....	.....	30.35	771.0	5.0	—15.0	94	SSE	22	10	.....	.....	10	.....	.....	.....	.....	.....	Central Physical Obs.
Kuopio	.....	.....	30.18	766.6	12.7	—10.7	100	W	7	3	.....	.....	2	.....	.....	.....	.....	.....	Ch. Forsten.
Kieff	.....	.....	29.89	759.2	23.9	— 4.5	98	ENE	9	4	.....	.....	10	.....	.....	.....	.....	Snowing.....	Physical Cabinet.
Nikolaiev	.....	.....	29.93	760.1	41.4	5.2	90	SE	7	3	.....	.....	10	.....	.....	.....	.....	.....	Kurdakof
Kertch	.....	.....	29.85	758.2	43.2	6.2	91	Calm	0	0	.....	.....	9	.....	.....	.....	.....	.....	Lagorio.
Moscow	.....	.....	30.44	773.1	5.7	—14.6	82	NNW	4	2	.....	.....	0	.....	.....	.....	.....	.....	Meteorological Obs.
Lugan	.....	.....	29.94	760.5	27.1	— 2.7	87	ENE	22	10	.....	.....	10	.....	.....	Rain	Blank	.....	Meteorological Obs.
Archangel	.....	.....	29.85	758.1	10.8	—11.8	100	W	16	8	.....	.....	10	.....	.....	.....	.....	.....	Ogorodnikof.
Tiflis	28.56	725.4	30.00	761.9	48.7	9.3	32	N	4	2	.....	.....	0	.....	.....	.....	.....	.....	Physical Observatory.
Astrukhan	.....	.....	30.03	762.7	34.2	1.2	89	NE	2	1	.....	.....	10	.....	.....	.....	.....	.....	Sebastianof.
Kasan	.....	.....	30.13	765.2	12.4	—10.9	83	W	11	5	.....	.....	4	.....	.....	.....	.....	.....	Physical Cabinet.
Orenburg	.....	.....	30.55	776.0	— 9.9	—23.3	58	E	18	8	.....	.....	0	.....	.....	.....	.....	.....	Tschernischef.
Ekaterinburg	28.70	729.0	29.72	754.9	9.0	—12.3	77	SW	22	10	.....	.....	9	.....	.....	.....	.....	.....	Meteorological Obs.
Nukuss	.....	.....	30.21	767.4	36.3	2.4	55	E	4	2	.....	.....	0	.....	.....	.....	.....	.....	
Kasaly	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Bobrof.
Tashkend	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Michelson.
Barnaul	.....	.....	30.46	774.2	— 3.5	—19.7	74	N	4	2	.....	.....	1	.....	.....	.....	.....	.....	Meteorological Obs.
Yenisetsk	.....	.....	30.38	771.6	— 8.5	—22.5	67	SE	7	3	.....	.....	0	.....	.....	.....	.....	.....	Marks.
Irkutsk	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Usolxef.
Peking, (China)	.....	.....	30.57	776.4	14.0	—10.0	48	Calm	0	0	.....	.....	0	.....	.....	.....	.....	.....	Physical Observatory.
Nertchinsk	27.88	708.1	30.24	768.2	—15.7	—26.5	85	NW	4	2	.....	.....	0	.....	.....	.....	.....	.....	Meteorological Obs.
Vladivostock	.....	.....	30.19	766.8	2.1	—16.6	75	NW	2	1	.....	.....	0	.....	.....	.....	.....	.....	
Nikolaievsk, on the Amoor	.....	.....	.....	.....	23.9	— 4.5	.....	E	9	4	.....	.....	10	.....	.....	.....	.....	Snowing....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols; they omit the rain-fall. The elevation of Tiflis is 409 meters, or 1,341.8 feet; Ekaterinburg, 306.4? m., or 1,005.2? ft.; Tashkend, 494.2? m., or 1,621.3? ft.; Irkutsk, 392 m., or 1,286 ft.; Nertchinsk, 592.0? m., or 1,942.2? ft.

SPANISH SERIES.

Furnished by the coöperation of Antonio Aguilar, Director of the Royal Observatory at Madrid, and of Don Cecilio Pujazon, Captain R. N. Director of the Naval Observatory at San Fernando.

Madrid	.....	.....	30.26	768.7	41.4	5.2	89	SW	13.4	6.00	.....	.....	10	.....	.....	0.008	0.2	Covered	Royal Observatory.
San Fernando	.....	.....	30.39	771.9	55.0	12.8	54	N	14.5	6.5	.....	0	3	.....	N	0	0	.....	Naval Observatory.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

Note.—The originals give the weather in general terms, as published; rain-fall for San Fernando from preceding to following midnight; wind-velocity for Madrid in kilometers per hour.

SWEDISH SERIES.

Furnished by the coöperation of Professor R. Rubenson, Director of the Royal Swedish Meteorological Institute, at Stockholm, and of Dr. H. H. Hildebrandsson, Chief of the Meteorological Division of the Upsala Observatory.

Haparanda	.....	.....	30.24	768.1	—10.5	—23.6	82	Calm	.....	.....	0	.....	10	.....	.....	0	0	Foggy	
Umea	.....	.....	30.22	767.6	16.0	— 8.4	100	Calm	.....	.....	0	.....	8	.....	.....	0	0	.....	
Hernosand	.....	.....	30.27	768.8	— 7.2	—21.8	100	N	.....	.....	2	.....	0	.....	.....	0	0	.....	
Stockholm	.....	.....	30.23	767.7	19.8	— 6.8	94	ENE	.....	.....	2	.....	10	.....	.....	0.004	0.1	.....	
Wisby	.....	.....	30.16	766.1	25.2	— 3.8	73	ESE	.....	.....	6	.....	0	.....	.....	0	0	.....	
Sub-Series.																			
Upsala	.....	.....	30.27	768.8	— 2.6	—19.2	100	NNW	3.8	1.7	.....	.....	10	.....	.....	0.004	0.09	Foggy	Dr. Hildebrandsson.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

Note.—The originals give the wind-force by the scale 0 to 6, and Upsala also velocity in meters per second; occasionally, the weather by the Vienna symbols, or in general terms; no distinction between the amount of upper and lower clouds. The rain-fall is measured at 8 a. m., local time.

SWISS SERIES.

Furnished by the coöperation of Professor R. Wolf, Director of the Observatory at Zurich, and of Professor E. Plantamour, Director of the Observatory at Geneva.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Geneva	28.49	723.7	29.95	760.7	44.2	6.8	51	SSW	.....	.....	4	.....	4	.....	.....	0.071	1.8	Cloudy	The Observatory.
Zurich	28.22	716.9	29.91	759.8	39.0	3.9	87	W	.....	.....	2	.....	9	.....	.....	0.157	4.0	Covered	The Observatory.

Note.—For Geneva the corresponding departures from the normal values are: Barometer,—4.0 mm; Thermometer, +5.4 cent.; Relative Humidity, —28 per cent.

Note.—The rain-fall is measured at Zurich at 7 a. m. on the following day. The originals give the barometer corrected but not reduced to sea-level; the wind-force by the scale 0 to 4 for Zurich; the amount of cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The elevation of Geneva is 408 meters, or 1,339 feet, and that of Zurich 470 meters, or 1,542 feet.

TURKISH SERIES.

Furnished by the coöperation of A. Coumbary, Effendi, Director of the Central Observatory at Constantinople, and of Professor C. V. A. Van Dyck, Superintendent of the Lee Observatory at Beirut.

Constantinople	.....	.....	29.89	759.1	52.9	11.6	61	SW	11	5.0	.....	.....	10	.....	SW	0	0	.....	
Fao, (Persian Gulf)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Salonica	.....	.....	29.90	759.4	59.0	15.0	.....	SW	.....	.....	1	.....	10	.....	.....	.....	.....	.....	
Valona	.....	.....	29.75	755.7	58.6	14.8	.....	NE	.....	.....	1	.....	10	.....	.....	.....	.....	.....	
Varna	.....	.....	29.74	755.5	51.8	11.0	.....	NE	.....	.....	1	.....	10	.....	.....	.....	.....	.....	
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y	.....	.....	29.95	760.7	65.3	18.5	68	W	.....	.....	2	.....	2ks	.....	NE	0	0	*D. clouds	Prof. C. V. A. Van Dyck.

Note.—The originals give the wind-force by the scale 0 to 7, (except Beirut, by the scale 0 to 12, and Constantinople velocity in meters per second;) the weather in general terms as published; no distinction between upper and lower clouds, and, except Constantinople and Beirut, the amount by the scale 0 to 4. It is assumed that the barometer is reduced to sea-level. * Detached clouds.

CANADIAN SERIES.

Furnished by the coöperation of Professor G. T. Kingston, Director of the Magnetic Observatory at Toronto, and Superintendent of the Meteorological Office of the Dominion of Canada, and the respective Observers. Those marked with a star (*) are also telegraphed daily to the office of the Chief Signal Officer, U. S. Army.

Bathurst, N. B	.....	.....	30.21	767.3	—10.5	—23.6	77	NW	6	2.7	.....	.....	0	.....	.....	0	0	.....	Hon. J. Ferguson.
Brockville, Ontario	.....	.....	30.64	778.2	—22	—30.0	.....	Calm	0	0	.....	0	0	.....	.....	0.15	3.8	Clear	W. R. Bigg.
*Chatham, N. B	.....	.....	30.15	765.8	—10	—23.3	100	W	12	5.4	.....	0	0	.....	.....	0.02	0.5	Clear	G. A. Blair.
Charlottetown, P. E. Island	.....	.....	30.00	762.0	4	—15.6	77	NW	15	6.7	.....	.....	10s	.....	.....	0.25	6.3	Cloudy	H. J. Cundall, C. E.
Cornwall, Ontario	.....	.....	30.65	778.5	—22.6	—30.3	100	N	.....	.....	1	0	0	.....	.....	0	0	Bright	James Smith, M. A.
Dalhousie, N. B	.....	.....	30.22	767.6	.....	.....	.....	W	.....	.....	4	.....	.....	.....	.....	0	0	Threatening	H. A. Johnson.
Esquimault, B. C	.....	.....	30.51	774.9	33.1	0.6	92	NE	.....	.....	.....	0	0	.....	.....	0	0	Clear	W. H. Bevis.
Fredericton, N. B	.....	.....	30.30	769.6	—11.4	—24.1	85	NW	14	6.3	.....	0	0	.....	.....	0	0	Clear	Prof. Harrison.
*Fort Garry, Manitoba	.....	.....	30.53	775.4	—32	—35.6	100	SW	13	5.8	.....	0	0	.....	.....	0	0	Clear	James Stewart.
Goderich, Ontario	.....	.....	30.60	777.2	— 8.8	—22.7	79	Calm	.....	.....	0	5k	3s	N	.....	0.20	5.1	Cloudy	H. J. Strang, M. A.
Granton, Ontario	29.27	743.4	30.55	776.0	—10.1	—23.4	.....	NE	.....	.....	1	0	0	.....	.....	0.500	12.70	Clear	James Grant.
*Halifax, N. S	.....	.....	29.94	760.5	18	— 7.8	97	NW	25	11.2	.....	0	2ks	.....	W	0.030	0.76	Fair	F. Allison, M. A.
Hamilton, Ontario	.....	.....	30.61	777.5	— 5.3	—20.7	.....	NE	.....	.....	3	.....	10n	.....	.....	0	0	Cloudy	G. Dickson.
Heart's Content, N. F	.....	.....	29.53	760.0	25	— 3.9	87	S	.....	.....	2	.....	10	.....	.....	0.03	0.8	Snowing	E. Weedon.
*Kingston, Ontario	.....	.....	30.69	779.5	—20	—28.9	80	N	2	0.9	.....	0	0	.....	.....	0.13	3.3	Clear	S. Woods, M. A.
*Montreal, Quebec	.....	.....	30.63	778.0	—21	—29.4	92	N	8	3.6	.....	0	0	.....	.....	0.09	2.3	Clear	C. H. McLeod, C. E.
*Ottawa, Ontario	.....	.....	30.66	778.7	—24	—31.1	83	NW	8	3.6	.....	0	0	.....	.....	0.05	1.3	Clear	J. B. Haney.
*Parry Sound, Ontario	.....	.....	30.70	779.8	—28	—33.3	94	E	2	0.9	.....	0	0	.....	.....	0.18	4.6	Clear	Rev. R. Mosley.
Port Dover, Ontario	.....	.....	30.53	775.4	— 7	—21.7	92	NE	10	4.5	.....	.....	Haze	.....	.....	0.80	20.3	Cloudy	H. Morgan.
Port Hastings, N. S	.....	.....	29.92	760.0	1.8	—16.8	.....	NW	20	8.9	.....	.....	.....	.....	.....	Inap.	Inap.	Blustering	Peter Grant.
Port Stanley, Ontario	.....	.....	30.53	775.4	— 6	—21.1	81	E	8	3.6	.....	2k	0	W	.....	0.65	16.5	Clear	M. Payne.
*Quebec, Quebec	.....	.....	30.49	774.4	—21	—29.4	100	NW	19	8.5	.....	0	0	.....	.....	0.40	10.2	Clear	Capt. Ashe, R. N.
*Rockliffe, Ontario	.....	.....	30.71	780.0	—32	—35.6	100	NW	2	0.9	.....	0	0	.....	.....	0.03	0.8	Clear	
St. John, N. B	.....	.....	30.33	770.4	— 4	—20.0	100	NW	20	8.9	.....	0	0	.....	.....	0	0	Clear	G. Murdoch, C. E.
*Saugeen, Ontario	.....	.....	30.59	777.0	—19	—28.3	44	Calm	0	0	.....	.....	10ks	.....	.....	0.15	3.8	Cloudy	K. Stewart.
Stayner, Ontario	.....	.....	30.65	778.5	—25	—31.7	52	Calm	0	0	.....	0	0	.....	.....	0.29	7.4	Clear	R. J. Cole.
Stratford, Ontario	29.06	738.1	30.55	776.0	—11.4	—24.1	80	NE	3	1.3	.....	3cs	0	.....	.....	0.50	12.7	Fine	C. J. MacGregor, M. A
*Sydney, C. B	.....	.....	29.72	754.9	18	— 7.8	87	NW	20	8.9	.....	0	5ks	.....	NW	0.11	2.8	Clearing	T. C. Hill.
*Toronto, Ontario	.....	.....	30.62	777.7	—12	—24.4	85	N	10	4.5	.....	.....	10s	.....	.....	0.35	8.9	Cloudy	Magnetic Observatory.
Woodstock, Ontario	.....	.....	30.58	776.7	—10.2	—23.4	100	E	12	5.4	.....	3c	4s	W	.....	0.01	0.3	Cloudy	J. Montgomery.
Sub-Series.																			
St. Johns, Newfoundland	.....	.....	29.64	752.8	24.0	— 4.4	.....	S	.....	.....	.....	10k	10s	.....	.....	0.16	4.1	Fair	John Delany.

Note.—The originals for Brockville, Charlottetown, Port Dover, Port Stanley, Stayner, St. Johns, N. F. and those telegraphed, give the amount of cloudiness by the scale 0 to 4. The elevation of Granton is 1,015 feet, or 309.4 m.; Stratford, 1,182 feet, or 360.3 m.

UNITED STATES SERIES.

Furnished by the coöperation of Bvt. Brig. Gen. Albert J. Myer, Chief Signal Officer, U. S. Army.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters	Weather.	Observer.
Albany, N. Y.	.....	.....	30.45	773.4	2	—16.7	72	NW	16	7.2	.....	.....	8ks	.....	NW	0.14	3.6	Cloudy	
Alpena, Mich.	.....	.....	30.62	777.7	— 5	—20.6	81	NW	4	1.8	.....	.....	10n	.....	.....	0.08	2.0	Light snow	
Atlantic City, N. J.	.....	.....	30.30	769 6	31	— 0.6	89	N	9	4.0	.....	10cs	0	W	.....	0	0	Cloudy	
Augusta, Ga.	.....	.....	30.34	770.6	44	6.7	92	NW	6	2.7	.....	0	Fog	.....	.....	0	0	Clear	
Baltimore, Md.	.....	.....	30.31	769.9	37	2.8	80	SE	2	0.9	.....	2c	5s	.....	.....	0	0	Cloudy	
Barnegat, N. J.	.....	.....	30.30	769.6	30	— 1.1	89	N	8	3.6	.....	10ck	0	W	.....	0	0	Cloudy	
Bismarck, Dakota	28.56	725.4	30.55	776.0	—26	—32.2	49	Calm	.....	.....	.....	0	0	.....	.....	0	0	Clear	
Boston, Mass.	.....	.....	30.30	769.6	18.5	— 7.5	84	N	12	5.4	.....	Haze	Haze	.....	.....	Inap.	Inap.	Hazy	
Breckenridge, Minn.	.....	.....	30.72	780.3	—20	—28.9	64	SW	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Buffalo, N. Y.	.....	.....	30.51	774.9	4.0	—15.6	74	NE	7	3.1	.....	10k	Sm'k	NE	.....	0.86	21.8	Cloudy	
Burlington, Vt.	.....	.....	30.64	778.2	—14	—25.6	73	N	3	1.3	.....	0	2s	.....	.....	0.03	0.8	Fair	
Cairo, Ill.	.....	.....	30.14	765.5	35	1.7	90	N	11	4.9	.....	.....	10n	.....	.....	0.27	6.9	Light rain	
Cape Hatteras, N. C.	.....	.....	30.26	768.6	51	10.6	93	W	6	2.7	.....	.....	8ks	.....	W	0	0	Cloudy	
Cape Henry, Va.	.....	.....	30.27	768.8	45	7.2	76	W	6	2 7	.....	5ck	2s	W	.....	0	0	Fair	
Cape Lookout, N. C.	.....	.....	30.34	770.6	48	8.9	93	W	7	3.1	.....	5ck	2s	W	.....	0	0	Fair	
Cape May, N. J.	.....	.....	30.30	769.6	35	1.7	70	N	8	3.6	.....	.....	10s	.....	W	0	0	Cloudy	
Charleston, S. C.	.....	.....	30.34	770.6	52	11.1	93	S	8	3.6	.....	0	1s	.....	.....	0	0	Clear	
Cheyenne, Wyoming	24.00	609.6	29.94	760.5	— 2	—18.9	100	W	4	1.8	.....	0	2s	.....	.....	0.07	1.8	Fair	
Chicago, Ill.	.....	.....	30.35	770.9	15	— 9.4	82	NE	16	7.2	.....	.....	10s	.....	NE	0.21	5.3	Cloudy	
Cincinnati, Ohio	.....	.....	30.18	766.6	31	— 0.6	89	E	7	3.1	.....	.....	10n	.....	E	0.13	3.3	Light rain	
Cleveland, Ohio	.....	.....	30.43	772.9	9	—12.8	89	NE	6	2.7	.....	.....	10s	.....	.....	0.32	8.1	Cloudy	
Corsicana, Tex.	.....	.....	30.17	766.3	42	5.6	83	NW	16	7.2	.....	.....	10s	.....	.....	0	0	Cloudy	
Davenport, Iowa	.....	.....	30.47	773.9	3	—16.1	87	NE	5	3.6	.....	.....	10n	.....	.....	0.24	6.1	Light snow	
Denison, Tex.	.....	.....	30.33	770.4	23	— 5.0	85	NW	12	5.4	.....	.....	10s	.....	N	0	0	Cloudy	
Denver, Co'	24.84	630.9	30.06	763.5	— 6	—21.1	81	Calm	0	0	.....	0	0	.....	.....	0.55	14.0	Clear	
Detroit, Mich.	.....	.....	30.47	773.9	5	—15.0	75	NE	11	4.9	.....	2c	2s	.....	NE	0.37	9 4	Fair	
Dodge City, Kan.	27.71	703.8	30.34	770.6	— 3	—19.4	83	N	28	12.5	.....	.....	10s	.....	.....	0.06	1.5	Cloudy	
Dubuque, Iowa	.....	.....	30.56	776.2	1	—17.2	72	N	2	0.9	.....	.....	10s	.....	.....	0.03	0.8	Cloudy	
Duluth, Minn.	.....	.....	30.66	778.7	—14	—25.6	73	NW	2	0.9	.....	.....	10s	.....	.....	0	0	Cloudy	
Eastport, Me.	.....	.....	30.26	768.6	— 3	—19.4	66	NW	27	12.1	.....	0	0	.....	.....	0.04	1.0	Clear	
Erie, Pa.	.....	.....	30.46	773.7	2	—16.7	93	N	16	7.2	.....	.....	10s	.....	.....	0.35	8.9	Cloudy	
Escanaba, Mich.	.....	.....	30.63	778.0	— 5.6	—20.8	81	NW	7	3.1	.....	.....	10s	.....	.....	0	0	Cloudy	
Fort Gibson, Indian Ter.	.....	.....	30.22	767.6	17	— 8.3	83	N	20	8.9	.....	.....	10n	.....	N	0	0	Light snow	
Ft. St. Michael, Alaska	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Fort Sill, Indian Ter.	29.19	741.4	30.43	772.9	14	—10.0	44	N	19	8.5	.....	10cs	0	NW	.....	0	0	Cloudy	
Fort Sully, Dakota	28.80	731.5	30.77	781.5	—11	—23.9	76	Calm	0	0	.....	0	2s	.....	.....	0	0	Fair	
Florence, Arizona	28.32	719.3	29.85	758.2	45	7.2	.....	SW	.....	.....	.....	.....	10s	.....	SW	0	0	Cloudy	
Galveston, Tex.	.....	.....	30.12	765.0	60	15.6	100	SE	8	3.6	.....	.....	Fog	.....	.....	0	0	Foggy	
Grand Haven, Mich.	.....	.....	30.46	773.7	0	—17.8	85	NE	9	4.0	.....	0	5s	.....	NW	0.11	2.8	Fair	
Indianapolis, Ind.	.....	.....	30.22	767.6	26	— 3.3	88	NE	7	3.1	.....	.....	10n	.....	NE	0.21	5.3	Light rain	
Indianola, Tex.	.....	.....	30.05	763.3	59	15.0	87	SE	4	1.8	.....	.....	10s	.....	.....	0	0	Cloudy	
Jacksonville, Fla.	.....	.....	30.33	770.4	56	13.3	93	NW	4	1.8	.....	8k	Fog	NW	.....	0	0	Foggy	
Keokuk, Iowa	.....	.....	30.34	770.6	8	—13.5	78	N	10	4.5	.....	.....	10s	.....	N	0	0	Cloudy	
Key West, Fla.	.....	.....	30.24	768.1	70	21.1	95	E	10	4.5	.....	0	5s	.....	.....	0	0	Fair	
Kittyhawk, N. C.	.....	.....	30.28	769.1	42	5.6	91	W	8	3.6	.....	0	2s	.....	.....	0	0	Fair	
Knoxville, Tenn.	.....	.....	30.26	768.6	38	3.	71	Calm	0	0	.....	.....	10ks	.....	SW	0	0	Cloudy	
La Crosse, Wis.	.....	.....	30.62	777.7	— 5	—20.6	100	N	8	3.6	.....	.....	10n	.....	N	0.02	0 5	Light snow	
Leavenworth, Kan.	.....	.....	30.45	773.4	2	—16.7	86	N	16	7.2	.....	.....	10s	.....	N	0	0	Cloudy	
Louisville, Ky.	.....	.....	30.13	765.3	37	2.8	90	NE	8	3.6	.....	.....	10n	.....	.....	0.18	4.6	Light rain	
Lynchburg, Va.	.....	.....	30.29	769.4	36	2.2	80	Calm	0	0	.....	5ck	0	SW	.....	0	0	Fair	
Malone, N. Y.	.....	.....	30.66	778.7	—22	—30.0	60	Calm	0	0	.....	0	0	.....	.....	0.34	8.6	Clear	
Marquette, Mich.	.....	.....	30.57	776.5	— 5	—20.6	63	W	12	5.4	.....	.....	10s	.....	.....	0	0	Cloudy	
Memphis, Tenn.	.....	.....	30.09	764.3	60	15.6	94	S	2	0.9	.....	.....	10s	.....	SW	0	0	Cloudy	
Milwaukee, Wis.	.....	.....	30.47	773.9	11	—11.7	79	NE	18	8.0	.....	.....	10s	.....	NE	0.67	17.0	Cloudy	
Mobile, Ala.	.....	.....	30.27	768.8	59	15.0	96	Calm	0	0	.....	.....	Fog	.....	.....	Inap.	Inap.	Dense fog	
Montgomery, Ala.	.....	.....	30.31	769.9	56	13.3	96	S	1	0.4	.....	.....	Fog	.....	.....	0	0	Foggy	
Morgantown, W. Va.	29.17	740.9	30.28	769.1	30	— 1.1	89	N	8	3.6	.....	.....	10s	.....	N	0.21	5.3	Cloudy	
Mt. Washington, N. H.	23.47	596.1	29.83	757.7	— 9	—22.8	56	NW	50	22.4	.....	0	0	.....	.....	0	0	Clear	
Nashville, Tenn.	.....	.....	30.11	764.8	54	12.2	93	Calm	0	0	.....	.....	10s, fg	.....	SW	0	0	Cloudy	
New Haven, Conn.	.....	.....	30.32	770.1	27	— 2.8	65	N	8	3.6	.....	Haz.	0	.....	.....	Inap.	Inap	Clear	
New London, Conn.	.....	.....	30.28	769.1	30	— 1.1	78	NW	12	5.4	.....	1c	Haze	W	.....	Inap.	Inap.	Clear	
New Orleans, La.	.....	.....	30.20	767.1	61	16.1	100	S	6	2.7	.....	.....	Fog	.....	.....	0.02	0.5	Dense fog	
Newport, R. I.	.....	.....	30.26	768.6	30	— 1.1	79	W	5	2.2	.....	0	2s	.....	NW	0.03	0.8	Clear	
New York, N. Y.	.....	.....	30.32	770.1	32	0.0	89	NW	10	4.5	.....	5cs	Sm'k	W	.....	Inap.	Inap.	Fair	
Norfolk, Va.	.....	.....	30.27	768.8	45	7.2	76	SW	3	1.3	.....	10k	0	W	.....	0	0	Cloudy	
North Platte, Neb.	27.31	693.7	30.20	769.4	—11	—23.9	100	NW	6	2.7	.....	.....	10s	.....	.....	0.23	5.8	Cloudy	
Omaha, Neb.	29.34	745.2	30.60	777.2	— 7	—21.7	100	N	16	7.2	.....	.....	10n	.....	.....	0.01	0.3	Light snow	
Oswego, N. Y.	.....	.....	30.59	777.0	— 7	—21.7	100	N	16	7.2	.....	.....	11az.	.....	N	0.08	2.0	Cloudy	
Pembina, Dakota	.....	.....	30.50	774.7	—23	—30.6	58	S	6	2.7	.....	0	0	.....	.....	0	0	Clear	
Philadelphia, Pa.	.....	.....	30.34	770.6	31	— 0.6	80	NE	13	5.8	.....	5c	0	.....	.....	Inap	Inap	Fair	
Pike's Peak, Col.	17.37	441.2	29.58	751.3	2	—16.7	100	NW	8	3.6	.....	0	Fog	.....	.....	0.07	1.8	Foggy	
Pittsburgh, Pa.	.....	.....	30.32	770.1	28	— 2.2	88	N	5	2.2	.....	.....	10s	.....	N	0.58	9.7	Cloudy	
Port Huron, Mich.	.....	.....	30.51	774.9	— 1	—18.3	84	E	16	7.2	.....	2cs	10s	.....	.....	0.96	24.4	Cloudy	
Portland, Me.	.....	.....	30.30	769.6	10	—12.2	68	N	10	4.5	.....	0	0	.....	.....	0.07	1.8	Clear	
Portland, Oregon	.....	.....	30.45	773.4	33	0.6	83	N	1	0.4	.....	0	0	.....	.....	0	0	Clear	
Punta Rassa, Fla.	.....	.....	30.30	769.6	68.0	20.0	90	NE	8	3.6	.....	1cs	0	SW	.....	0	0	Clear	
Rochester, N. Y.	.....	.....	30.54	775.7	3	—16.1	87	E	7	3.1	.....	.....	10s	.....	.....	0.19	4.8	Cloudy	
Salt Lake City, Utah	25.60	650.2	29.93	760.2	21	— 6.1	85	NE	4	1.8	.....	0	0	.....	.....	Inap.	Inap.	Clear	
Sandy Hook, N. J.	.....	.....	30.28	769.1	31	— 0.6	79	NW	12	5.4	.....	5c	0	SW	.....	0.03	0.8	Fair	
San Diego, Cal.	.....	.....	29.89	759.2	57	13.9	76	SW	12	5.4	.....	0	5s	.....	SW	0	0	Fair	
San Francisco, Cal.	.....	.....	29.98	761.5	45	7.2	98	NW	28	12.5	.....	0	0	.....	.....	0	0	Clear	
Santa Fé, N. M.	23.10	586.7	29.64	752.8	34	1.1	43	E	7	3.1	.....	0	5s	.....	.....	0	0	Fair	
Savannah, Ga.	.....	.....	30.34	770.6	52	11.1	86	SE	4	1.8	.....	10ks	Sm'k	SW	.....	0	0	Cloudy	
Shreveport, La.	.....	.....	30.14	765.5	63	17.2	91	S	4	1.8	.....	.....	10s	.....	S	0	0	Cloudy	
Smithville, N. C.	.....	.....	30.33	770.4	51	10.6	93	W	7	3.1	.....	5k	Fog	W	W	0	0	Cloudy	
Springfield, Mass.	.....	.....	30.34	770.6	25	— 3.9	74	N	3	1.3	.....	0	0	.....	.....	Inap.	Inap	Clear	
St. Louis, Mo.	.....	.....	30.20	767.1	30	— 1.1	89	NW	8	3.6	.....	.....	10s	.....	.....	0.09	2.3	Cloudy	
St. Marks, Fla.	.....	.....	30.32	770.1	56	13.3	97	NE	3	1.3	.....	Haze	8s	SW	.....	0.03	0.8	Cloudy	
St. Paul, Minn.	.....	.....	30.08	779.3	—14	—25.6	73	NW	1	0.4	.....	.....	10s	.....	.....	0	0	Cloudy	
St. Paul's Island, Alaska	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Thatcher's Island, Mass.	.....	.....	30.29	769.4	19	— 7.5	39	NW	36	16.1	.....	0	0	.....	.....	0	0	Clear	
Toledo, Ohio	.....	.....	30.43	772.9	8	—13.3	77	NE	8	3.6	.....	.....	10s	.....	.....	0.49	12.4	Cloudy	
Tucson, Arizona	27.40	696.0	29.96	761.0	52	11.1	.....	SE	.....	.....	.....	.....	10ks	.....	W	0	0	Cloudy	
Tybee Island, Ga.	.....	.....	30.32	770.1	48	8.9	92	S	4	1.8	.....	10k	0	SW	.....	0	0	Cloudy	
Vicksburg, Miss.	.....	.....	30.21	767.3	63	17.2	97	S	10	4.5	.....	.....	10ks	.....	SW	0	0	Cloudy	
Virginia City, M. T.	24.30	617.2	29.78	756.4	— 8	—22.2	61	Calm	0	0	.....	0	0	.....	.....	Inap.	Inap	Clear	
Washington, D. C.	.....	.....	30.31	769.9	37	2.8	80	S	5	2.2	.....	10cs	Sm'k	W	.....	0	0	Cloudy	
Wilmington, N. C.	.....	.....	30.30	769.6	53	11.7	86	SW	6	2.7	.....	0	2s	.....	NW	0	0	Fair	

UNITED STATES SERIES.—Continued.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Wood's Holl, Mass.	.....	.....	30.28	769.1	30	— 1.1	68	NW	10	4.5	.....	0	5s	.....	NW	0.10	2.5	Fair	
Yankton, Dakota	29.26	743.2	30.82	782.8	—18	—27.8	67	NW	13	5.8	.....	5cs	0	NW	.....	0.08	2.0	Fair	
Yuma, Arizona	.....	.....	29.85	758.2	52	11.1	.....	N	.....	.....	.....	.....	10s	.....	N	0	0	Cloudy	
Sub-Series.																			
Kingston, Jamaica, W. I.	.....	.....	30.26	768.6	74	23.3	72	Calm	0	0	.....	2c	2s	SE	.....	0	0	.....	James Gall.
Navassa, W. I.	.....	.....	.....	.....	79	26.1	.....	NE	.....	.....	1	.....	.....	.....	.....	0	0	Clear	F. M. Everett.
Clifton, Ja., W. I.	27.28	692.9	30.06	763.5	67	19.4	84	NE	4.0	1.8	.....	2c	0	NE	.....	0	0	Fine, clear	C. Partridge.
Paramaribo, D. Guiana, S. A.	.....	.....	30.02	762.5	80	26.7	91	E	.....	.....	3	.....	7ks	.....	E	0.140	3.56	½ cloudy	C. J. Hering.
Batavia, Dutch Guiana, S. A.	30.08	764.0	.....	.....	76.1	24.5	.....	E	.....	.....	.....	.....	.....	.....	.....	0	0	½ cloudy	Dr. H. Groot.
Medellin, Colombia, S. A.	25.21	640 3	.....	.....	63.8	17.7	78	Calm	.....	.....	0	4k	0	.....	.....	0	0	Fair	Thomas Herran.
York Factory, B. A.	.....	.....	29.90	759.4	—20.0	—28.9	.....	SW	21	9.4	.....	0	0	.....	.....	0	0	Hazy	J. Fortescue, W. Wood.
Honolulu, Oahu, H. I.	.....	.....	30.04	763.0	65	18.3	94	Calm	.....	.....	0	.....	.....	.....	.....	0	0	Clear	Daniel Smith.
Makawao, Maui, H. I.	.....	.....	29.90	759.4	60	15.6	81	NE	.....	.....	1	0	3k	.....	.....	Inap.	Inap.	.....	F. L. Clarke.

Marine Series.	True course towards.	Hourly rate in knots.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	State of ocean.	Direction of swell from—	Weather.	Observer.
Schooner Addie Fuller, Throgs Neck.	.....	.....	30.27	768.8	32	0.0	90	N	5	2.2	.....	0	2s	.....	NE	.....	.....	Clear	Capt. James Jorgensen.

Note.—The originals give the amount of cloudiness by the scale 0 to 4, except York Factory, Makawao, Medellin and Paramaribo. The elevation of the barometer at Bismarck is 1,677 feet, or 511.1 meters; Cheyenne, 6,057.3 ft., or 1,846.2 m.; Clifton, about 2,892 ft. or 881.5 m.; Denver, 5,135 ft., or 1,565.2 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Florence, 1,550 (?) ft., or 472.5 (?) m.; Makawao, 2,205 ft., or 672.1 m.; Morgantown, 1,027.9 ft., or 313.3 m.; Medellin, 4,876 ft., or 1,486.2 m.; Mt. Washington, 6,285 ft., or 1,915.6 m.; North Platte, 2,846 ft., or 867.4 m.; Omaha, 1,054.6 ft., or 321.4 m.; Pike's Peak, 14,150.7 ft., or 4,313.1 m.; Salt Lake City, 4,362.2 ft., or 1,329.6 m.; Santa Fé, 6,862.2 (?) ft., or 2,091.6 (?) m.; Tucson, 2,513 (?) ft., or 772.1 (?) m.; Virginia City, 5,480 (?) ft., or 1,670.3 (?) m.; Yankton, 1,278 ft., or 389.5 m. The following constants are added in correcting the barometric observations for altitude: Cheyenne, 5.04 inches; Denver, 5.22 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fé, 6.64 in.; Tucson, 2.59 in.; Virginia City, 5.48 in. The elevation of Batavia is about 6 feet; the barometric readings need the addition of 0.2 mm. or 0.01 in. for reduction to sea-level.

UNITED STATES NAVAL SERIES.

By authority of the **SECRETARY OF THE NAVY.**

Furnished by the coöperation of the Navy Department, through Commodore Daniel Ammen, U. S. N., Chief of Bureau of Navigation.

STATIONS AND VESSELS.	True course toward—	Hourly rate in knots.	*Barometer as reported.		Temperature of the Air.		Relative Humidity.	Wind.				Clouds.				Rain-fall or melted snow in the past 24 hours.		State of Ocean.	Direction of swell from—	Weather.	Observer.
								Direction.	Velocity		Force.	Amount.		Direction.							
												Up'er	Low'r	Up'er	Low'r						
			Inches.	Millimeters.	Fahrenheit.	Centigrade.	Per cent.	From—	Miles per hour.	Meters per second.	0—10.	0—10.	0—10.	From—	From—	Inches.	Millimeters.				
Naval Academy, Annapolis, Md.			29.93	760.2	37	2.8	74	NE			2		9			0	0			Cloudy	
Navy Yard, Norfolk, Va.			30.40†	772.1†	44	6.7		SW			1		10k		NW					‡D. clouds	
Navy Yard, Pensacola, Fla.			30.32	770.1	57.5	14.2		NE			1		9		NE					Foggy	
Navy Yard, Portsmouth, N.H.			30.25	768.3	10	—12.2		WNW			5		0							Clear	
Navy Yard, Wash'gton, D. C.			30.31	769.9	35	1.7		E			1		6							Fair	
Adams, Port Royal, S. C.			30.37	771.4	55	12.8	93	SSE			1-2		9		NE					‡D. clouds.	
Ajax Port Royal, S. C.			30.04	763.0	53	11.7		Calm			0		8		S					Pleasant	
Alarm, New York, N. Y.			29.26†	743.2†	32	0.0		NW			2		4		E	0	0			Hazy	
Canonicus, New Orleans, La.			29.69†	754.1†	59	15.0		S			3									Foggy	
Catskill, Port Royal, S. C.			30.28†	769.1†	52	11.1		SSE			2		6		W			Smooth		Fair	
Colorado, New York, N. Y.			30.37	771.4	32	0.0		NW			3		9		E	0	0			Hazy	
Despatch, Washington, D. C.			30.37†	771.4†	35	1.7		NE			1		9							Cloudy	
Dictator, Port Royal, S. C.			30.39	771.9	51	10.6	93	ESE			0-1		9							Cloudy	
Essex, Hampton Roads, Va.			30.22	767.6	42	5.6	100	SW			0-1		7							‡D. clouds	
Franklin, New York, N. Y.			30.36	771.1	35.5	1.9	100	NW			2		4		NW			Smooth		‡D. clouds	
Hartford, Hampton Roads, Va.			30.38	771.6	41	5.0		SSW			1		7		NE	0	0			Clear	
Huron, Port Royal, S. C.			30.42	772.7	56	13.3	81	SE			0-1		9		N&E					‡D. clouds	
Intrepid, New York, N. Y.			30.35	770.9	31	— 0.6		NW			2		4		E					Hazy	
Manhattan, Port Royal, S. C.			30.30†	769.6†	52	11.1		SSE			2		6		E			Smooth		‡D. clouds	
Michigan Erie, Pa.			30.46	772.2	2	—16.7	86	N			3		10							Cloudy	
Minnesota, New York, N. Y.			30.43	772.9	32	0.0	100	NW			3		4		NW					Clear	
Monongahela, Baltimore, Md.			30.34	770.6	40	4.4		NE			1		8		SW					‡D. clouds	
New Hampshire, Port Royal, S. C.			30.53	775.4	51	10.6		Calm			0		7		SW			Smooth		‡D. clouds	
Ossipee, New Orleans, La.			30.29	769.4	60	15.6		Calm			0									Foggy	
Santee, Annapolis, Md.			29.84†	757.9†	37	2.8	81	NE			2		9							Cloudy	
St. Louis, League Island, Pa.			30.18	766.6	34	1.1		NE			3		6		ESE	0	0			Cloudy	
Swatara, New York, N. Y.			30.44	773.2	32	0.0		NNW			4		2cs							‡D. clouds	
Tallapoosa, Washington, D. C.			30.16	766.1	34	1.1		ENE			1		8							‡D. clouds	
Wabash, Boston, Mass.			30.31	769.9	20	— 6.7		N			5		0							Blue sky	
Wyoming, Washington, D. C.			30.68†	779.3†	34	1.1		NE			1		5		SW					‡D. clouds	

* It is not known that the barometer is corrected for temperature, instrumental error or elevation. † Aneroid Barometer. ‡ Detached clouds.

COLLATED AT THE OFFICE OF THE CHIEF SIGNAL OFFICER OF THE ARMY, WASHINGTON, D. C.

The records which appear in this Bulletin are copied from the regular exchanges of this office, made in each instance in compliance with an especial request, and are published for the uses of the coöperating observers. The barometric readings in the first two columns are reduced to freezing and their respective standards; those in the second two also to mean sea-level. The "weather" is generally published as given.

When the distinction between the upper and lower strata of clouds is not reported, the *kinds* or *types*, viz: cirrus, cumulus, stratus, nimbus, scud, fracto, pallio, haze, fog and smoke, as indicated, respectively, by the letters c, k, s, n, d, f, p, hz., fg. and sm'e, are generally published with the amount in the lower-cloud column. The distinction between the upper and lower strata is carefully made in the United States Series and a portion of the Canadian Series, and the types are indicated by the above letters or their combinations in the proper column.

Albert J. Myer

Brig. Gen. (Bvt. Assg'd.) Chief Signal Officer, U. S. A.

BULLETIN

OF

INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON JANUARY 13, 1877.

7:35 A. M. WASHINGTON mean time.

0:7 A. M. MEXICO mean time.
7:7 A. M. SAN JOSE mean time.
0:6 P. M. LISBON mean time.
0:28 P. M. MADRID mean time.
0:43 P. M. GREENWICH mean time.
0:53 P. M. PARIS mean time.
1:1 P. M. BRUSSELS mean time.
1:4 P. M. UTRECHT mean time.
1:18 P. M. BERNE mean time.
1:26 P. M. CHRISTIANIA mean time.
1:33 P. M. COPENHAGEN mean time.
1:33 P. M. ROME mean time.
1:37 P. M. BERLIN mean time.
1:49 P. M. VIENNA mean time.
1:55 P. M. STOCKHOLM mean time.
2:18 P. M. ATHENS mean time.
2:39 P. M. CONSTANTINOPLE mean time.
2:44 P. M. ST. PETERSBURG mean time.

ALGERIAN SERIES.

Furnished by the coöperation of General d'Eudeville, Commandant Supérieur du Génie in Algeria.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Nemours	.....	.....	30.30	769.6	62.2	16.8	56	WNW	.....	.....	1	.....	9	.....	.....	0.071	1.8	Hidden	Charnot.
Algiers	.....	.....	30.23	767.7	62.2	16.8	.....	NW	.....	.....	2	.....	7	.....	.....	0.177	4.5	Cloudy	Peter.
La Calle	.....	.....	30.03	762.7	51.4	10.8	87	NW	.....	.....	3	.....	9	.....	.....	0.748	19.0	Hidden	Fleury.
Tunis	.....	.....	30.03	762.7	50.0	10.0	.....	NW	.....	.....	3	.....	6	.....	.....	0.039	1.0	Fair	Jacques.
Sfax	.....	.....																	
Suida	.....	.....																	
Tebessa	.....	.....	30.26	768.6	47.5	8.6	78	WNW	.....	.....	4	.....	2	.....	.....	0	0	Clear	Millot.
Geriville	.....	.....	30.07	763.8	38.3	3.5	.....	NW	.....	.....	4	.....	10	.....	.....	0.039	1 0	Hidden	Bourgeois.
Laghouat	.....	.....	30.21	767.4	51.3	10.7	40	N	.....	.....	3	.....	2	.....	.....	0	0	Clear	Lemaillot.
Biskra	.....	.....	30.16	766.0	50.9	10.5	56	N	.....	.....	6	.....	2	.....	.....	0	0	Clear	Guyot.
.....	.....	.....	30.13	765.3	61.7	16.5	62	NW	.....	.....	4	.....	8	.....	.....	0	0	Cloudy	Kuntz.
.....	.....	.....																	
.....	.....	.....																	

NOTE.—In the originals the distinction between the amount of upper and lower clouds is apparently not made. The weather is published as given. The rain-fall is measure at 7 a. m., local time.

AUSTRIAN SERIES.

Furnished by the cooperation of Professor Ferdinand Osnaghi, Director of the Imperial and Royal Central Meteorological Institute at Vienna.

Agram	.....	.....	29.91	759.6	42 6	5.9	82	NE	.....	.....	3	.....	10	.....	.....	0.205	5.2	.....	Prof. Ivan Stozir.
Cracow, I. R. Observatory	.....	.....	30.01	762 3	38.8	3.8	97	NE	.....	.....	1	.....	10	.....	.....	0	0	.....	Dr. Wierzbiski.
Eperies	.....	.....	29.90	759.4	42.1	5.6	74	N	.....	.....	3	.....	4cs,8	.....	S	0	0	.....	Julius Mikolik.
Gratz	28.74	730.1	30.02	762.4	40.0	7.8	47	NW	.....	.....	5	.....	10	.....	.....	0	0	.....	Andreas Rospini.
Hermannstadt	28.39	721.1	29.84	757.8	43.2	6.2	85	ESE	.....	.....	1	.....	10	.....	.....	0.041	1.05	.....	Prof. Reissenberger.
Kremsmünster	28.66	727.9	30.02	762.5	36.3	2.4	93	W	.....	.....	3	.....	10	.....	.....	0.335	8.5	.....	Prof. C. Wagner.
Lemberg	.....	.....	30.00	762.0	31.3	— 0.4	89	NE	.....	.....	1	.....	10	.....	.....	0	0	.....	Dr. T. Stanecki.
Nyiregyhaza	.....	.....																	Habasuda Daniel.
Pola	.....	.....	29.87	758.8	51.6	10.9	56	N	.....	.....	2	.....	10ks	.....	.....	0.037	0.95	.....	I.R.Hydrographic Office.
Szegedin	.....	.....	29.79	756.6	42.8	6.0	79	S	.....	.....	1	.....	10	.....	.....	0.327	8.30	.....	Karl Stancel.
Trieste	.....	.....	29.93	760.1	52.5	11.4	66	E	.....	.....	1	.....	9	.....	.....	0	0	Cloudy	Prof. V. Farolfi.
Vienna	.....	.....	29.99	761.7	42.8	6.0	74	W	.....	.....	2	.....	9	.....	.....	0	0	.....	I. R. Central Met. Obs'y.
.....	.....	.....																	
.....	.....	.....																	
.....	.....	.....																	
.....	.....	.....																	
.....	.....	.....																	

NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 7 p. m., local time. The elevation of Gratz is 343.5 meters, or 1,126.9 feet; Hermannstadt, 407.8 meters, or 1,337.9 feet; Kremsmünster, 383.6 meters, or 1,258.5 feet.

BELGIAN SERIES.

Furnished by the cooperation of J. C. Houzeau, Director of the Royal Observatory at Brussels.

Arlon	.....	.....	30.13	765.3	37.2	2.9	90	NNW	.....	.....	2	.....	10	.....	.....	0	0	.....	Royal Observatory.
Brussels	.....	.....	30.07	763.8	41.9	5.5	87	WNW	.....	.....	1	.....	10	.....	WSW	0	0	Misty	
Furnes	.....	.....	30.02	762.4	43.5	6.4	82	W	.....	.....	2	.....	5	.....	.....	0.051	1.3	.....	
Maseyck	.....	.....	30.06	763.4	39.7	4.3	89	W	.....	.....	3	.....	10	.....	.....	0.020	0.5	.....	
.....	.....	.....																	
.....	.....	.....																	

NOTE.—In the originals, the weather is occasionally given in general notes.

BRITISH SERIES

Furnished by the coöperation of Robert H. Scott, Esq., Director of the Meteorological Office, London, Alexander Buchan, Secretary of the Scottish Meteorological Society, Edinburgh, and the respective Observers.

STATIONS.	Barometer. Corrected for instrumental error and temperature. Inches.	Barometer. Corrected for instrumental error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force 0—10.	Clouds. Amount. Upper. 0—10.	Clouds. Amount. Lower. 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Aberdeen			29.93	760.2	39.7	4.3		S	23	10.3			5			0.045	1.14	Blue sky	William Boswell.
Ardrossan			29.97	761.2	39	3.9		SE			4		8					Misty	William McNeil.
Armagh, Observatory			29.77	756.1	40.8	4.9		SSE	26	11.6			10					Raining	S. Call, for Dr. Robinson.
Birr Castle, (Parsonstown)			29.76	755.9	48.4	9.1		S			1		10					Misty	J. Dreyer.
Bradford			30.00	762.0	36.8	2.7		S			1		5			0.05	1.3	*D. clouds	J. McLandsborough.
Bridgetown, (Barbados)			30.02	762.5	79.5	26.4		NE			3		7					Overcast	Sergt. J. F. Halanen, A. H. C.
Cambridge, Observatory			30.06	763.5	38.0	3.3		S			1		10ck					Overcast	H. Todd.
Cardington			30.05	763.3	40.0	4.4		SW			1		8					Overcast	John McLaren.
Carlisle																			T. Bell, for J. Cartmell
Chatham, School M. E.			30.08	764.0	38.7	3.7		Calm			0		(?					Overcast?...	Maj. C. N. Martin, R.E
Dartmoor	28.50	723.9	30.04	763.0	39.0	3.9		SW			1		10					Raining	R. E. Power.
Davos Platz, (Switzerland)	24.74	628.4			28.0	— 2.2	67	SW			1		8			0.028	0.71	*D. clouds	Francis Redford, M. A.
Donaghadee			29.81	757.2	41	5.0		S			4		10					Overcast	J. Mac Gowan.
Dover			30.05	763.3	41	5.0		SSW			3		5					½ clouded	J. Costello.
Eccles, (near Manchester)			29.98	761.5	37.8	3.2		SE	3.2	1.4			10					Misty	Thomas Mackereth.
Falmouth, Observatory			29.98	761.5	47.0	8.3		S			4		10					Rain & fog	The Staff.
Fort Napier, (Natal)	27.75	704.8	29.98	761.5	64.7	18.2		E			2		10					Overcast	P'vt. G. Salmon, A. H. C
Free Town, (Sierra Leone)			29.90	759.4	86.0	30.0		N			0		4					*D. clouds	
Galway, Queen's College			29.50	749.3	47	8.3		N			3		2					*D. clouds	Prof. A. H. Curtis.
Gibraltar, (Mediterranean)			30.29	769.4	61.2	16.3		NW			3		1					Blue sky	Corpl. C. Aitken, A.H.C.
Glasgow, Observatory			29.86	758.4	36.7	2.6		S			1		10					Overcast	Lewis Stuart.
Great Yarmouth			30.04	763.0	38	3.3		WNW			1		4					Foggy	G. T. Watson.
Greenwich, Royal Obs'y			30.07	763.8	40.1	4.5		SW			1		2					*D. clouds	The Staff, for G. B. Airy.
Guernsey			30.07	763.8	46	7.8		SSW			2		8					*D. clouds	Dr. S. E. Hoskins.
Helston			29.96	761.0	48	8.9		S			4		10m			0.14	3.6	Raining	M. P. Moyle.
Holyhead			29.87	758.7	42	5.6		S			5		5					Misty	John Tilston.
Kew, Observatory			30.08	764.0	40.1	4.5		SW	5	2.2								Misty	The Staff.
Kingstown			29.82	757.4	44	6.7		SSE			3		9					Overcast	George Mitchell.
Leicester Museum			30.03	762.7	39.9	4.4		SW			1		2					*D. clouds	Wm. J. Harrison, F.G.S.
Malta, (Mediterranean)			29.31	759.7	57.2	14.0		NW			2		6k					*D. clouds	Corp'l. P. Bravis, A.H.C.
Nairn			29.80	756.9	36	2.2		SE			2		10					Overcast	W. D. Penny.
Nassau, (Bahamas)			30.16	766.1	76	24.4		NE			2		2					Blue sky	Surg. Maj. Henry.
Nottingham, Observatory			30.02	762.5	36.4	2.4		S			1		5c,8		WSW	0.027	0.69	*D. clouds	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			30.01	762.2	37.0	2.8		S			1		9					Misty	Rev. Stephen Whitty.
Oxford, Radcliffe Obs'y			30.04	763.0	39	3.9		S			1		7					*D. clouds	J. Lucas.
Plymouth			30.02	762.5	43.4	6.3		NE			2		10					Raining	John Merrifield.
Roche's Point			29.81	757.2	49	9.4		SW			4		8					Raining	W. Kennedy.
Saint Ann's Head			29.91	759.7	45	7.2		SSE			6		8					Raining	John C. Walker.
Saint Helier, (Jersey)			30.08	764.0	47.0	8.3		W			4		10					Overcast	A. P. Amy.
Sandwick Manse, (Orkneys)			29.81	757.2	37.7	3.2		SE	27	12.1			3					*D. clouds	Rev. C. Clouston, LL. D.
Scarborough																			F. Shaw.
Scutari Cemetery, (Turkey)			29.87	758.7	51.6	10.9		SW			2		10					Raining	Sergt. W. H. Lyne.
Sheffield			30.04	763.0	37.5	3.1		SSW			1		10			0.022	0.59	Overcast	W. F. Cooper.
Silloth Rectory			29.80	756.9	38.0	3.3	90	Calm			0		7			0.190	4.83	*D. clouds	Rev. Francis Redford
Stonyhurst, Observatory			30.00	762.0	35.3	1.8		SE			1		10ns					Raining	Rev. S. J. Perry.
Stornoway, Lewis C., (Hebr.)			29.64	752.8	39	3.9		S			8		10					Raining	John Smith.
Stratfield Turgiss			30.07	763.8	38.1	3.6		NW			1		0					Foggy	Rev. Charles H. Griffith.
Thurso			29.79	756.7	38	3.3		SSE			4		6					Misty	John Trotter.
Truro, Royal Institution			29.86	758.4	51	10.6		S			2		10					Raining	W. Newcombe.
Valencia, Observatory			29.79	756.7	50.4	10.2		WSW	17	7.6			10					*D. clouds	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man)					46	7.8		ESE			7		10			0	0		Henry Mercer.
Cape Good Hope, Obs'y			30.11	764.8	74.9	23.8	54	SSE	28	12.5		0	0						The Staff, for E. J. Stone.
Hobart Town, (Tasmania)			29.74	755.4	70.0	21.1	94	S			2		0			0.01	0.3		Francis Abbott, F.R.A.S.
Leith, Restalrig Park			29.94	760.5	37.0	2.8		SE			1	6ck				0.03	0.8	Cloudy	Andrew Gibb.
Mauritius, Observatory			30.06	763.5	85.1	29.7	60	ENE	11.6	5.2		1	5		NE	0.08	2.0	Squally	C. Meldrum.
Melbourne, Observatory			30.00	762.0	64.1	17.8	52	Calm	0	0			2			0	0	Very fine	R. L. J. Ellery.
Monach L't-house, (Hebrides)			29.57	751.1	44	6.7		S			7		10			0.3	7.6		J. Youngclause.
North Unst, (Shetland Is.)			29.94	760.5	38	3.3		S			7	10	10						Robert Burnet.

NOTE.—Generally, the originals do not give the relative humidity, rain-fall, or distinction between upper and lower clouds. The originals give the wind direction to 32 points and weather by the Beaufort notation. The originals give the barometer for Aberdeen, Cardington, Galway, Oxford, St. Helier, Sandwick, Scarborough, Stonyhurst, Leith, Monach and North Unst as read off and the cloudiness for Stornoway by the scale 0 to 4. The wind-force is given by the scale 0 to 12 in the official series; 0 to 6 in the sub-series; except in lbs. per square foot for Greenwich and Hobart Town. The rain-fall is measured at Aberdeen at 10 a. m.; Bradford, 9 a. m.; Hobart Town, 7:30 a. m.; Nottingham, 6 p. m.; Mauritius, 9 a. m., local time. The elevation of Dartmoor is 1,400 feet, or 426.7 meters; Davos Platz, 5,105? feet, or 1,556.0? meters; Fort Napier, 2,210 feet, or 670.6 meters. *Detached clouds.

By authority of the
MINISTER OF FOREIGN AFFAIRS.

COSTA RICA SERIES.

Furnished by the coöperation of Senor Federico Maison, Director of the Central Office of Statistics and Meteorology.

San José																			

DANISH SERIES.

Furnished by the coöperation of Captain N. Hoffmeyer, Director of the Royal Danish Meteorological Institute at Copenhagen.

Copenhagen			30.13	765.4	28.4	— 2.0	86	E			6		10						
Fanöe			30.17	766.4	30.6	— 0.8	92	ENE			4		9						
Godthaab, (Greenland)			28.78	731.1	9.5	—12.5	92	W			3		10					Snowing	
Stykkisholm, (Iceland)			28.03	712.0	35.8	2.1	96	S			8		10					Raining	
Thorshavn, (Faröe)			29.53	750.0	41.5	5.3	78	SE			8		10						
Vestervig			30.23	767.8	25.9	— 3.4	78	ENE			4		10						

NOTE.—The originals give the wind-force by the scale 0 to 6; occasionally, weather by Vienna symbols; no distinction between the amount of upper and lower clouds.

FRENCH SERIES.

Furnished by the coöperation of His Excellency, U. J. Le Verrier, Director of the Paris Observatory, and the respective Observers.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er. 0—10.	Clouds. Amount. Low'r. 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Alençon	.....	.....	30.10	766.7	48.2	9	91	WSW	.....	.....	2	..c	..n	.....	SSW	0.031	0.8	Cloudy	Normal School.
Amiens	.....	.....	30.08	763.9	39.9	4.4	93	ENE	.....	.....	2	.....	5	.....	NW	0	0	Cloudy	Normal School.
Avignon	.....	.....	30.02	762.6	51.4	10.8	58	NNW	.....	.....	2	.....	0	.....	.....	0	0	Very clear	Normal School.
Bar-sur-Seine	.....	.....	30.14	765.5	37.6	3.1	96	W	.....	.....	1	.....	10	.....	.....	0.010	0.4	Foggy	C. Saillard.
Beaumette, (near Angers)	.....	.....	30.11	764.9	45.7	7.6	80	W	3.6	1.6	.....	.....	.....	.....	NW	0.028	0.7	.....	Beaumette Observ'tory.
Beauvais	.....	.....	30.14	765.6	36.7	2.6	91	SSE	.....	.....	1	.....	10	.....	.....	0	0	Covered	Normal School.
Besançon	.....	.....	30.13	765.2	42.8	6	70	SW	.....	.....	2	.....	2	.....	WSW	0	0	Slightly cl'dy	Normal School.
Bourg en Bresse	.....	.....	30.18	766.6	39.4	4.1	93	SE	.....	.....	1	.....	10n	.....	W	0.244	6.2	Covered	Normal School.
Bourges	.....	.....	30.08	764.1	45.0	7.2	91	NNE	.....	.....	2	.....	2	.....	NE	0.228	5.8	Slightly cl'dy	Normal School.
Brest	.....	.....	30.02	762.5	46.6	8.1	89	SW	.....	.....	3	.....	10	.....	SW	0.020	0.50	Raining	Naval Observatory.
Carcassonne	.....	.....	29.97	761.3	53.6	12	83	W	.....	.....	2	.....	10	.....	E	0.08	2.	Covered	Normal School.
Caen	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Chartres	.....	.....	30.09	764.3	41.7	5.4	95	S	.....	.....	2	.....	10	.....	.....	0	0	Covered	Normal School.
Châlons-sur-Marne	.....	.....	30.15	765.7	34.5	1.4	93	NE	.....	.....	3	.....	10	.....	.....	0	0	Foggy	Normal School.
Clermont	.....	.....	30.10	764.5	44.4	6.9	69	W	.....	.....	3	.....	8	.....	NW	0.039	1.0	Very cloudy	Puy de Dome Obs'y.
Commercy	.....	.....	30.09	764.3	36.9	2.7	89	W	.....	.....	2	.....	2k	.....	SW	0	0	Slightly cl'dy	Normal School.
Commune de Gréasqu *	.....	.....	30.04	762.9	48.2	9.0	50	NW	.....	.....	4	.....	0	.....	.....	0	0	.....	M. Kina.
Grenoble	.....	.....	30.11	764.9	40.6	4.8	64	ENE	.....	.....	2	.....	0	.....	.....	0	0	Clear	Normal School.
La Roche-sur-Yon	.....	.....	30.16	766.1	46.0	7.8	77	W	.....	.....	1	.....	8	.....	SE	0.110	2.8	Very cloudy	Normal School.
Le Mans	.....	.....	30.14	765.5	44.2	6.8	77	NNW	.....	.....	3	.....	2	.....	NW	0.122	3.1	Slightly cl'dy	Normal School.
Lons-Le-Saulnier	.....	.....	30.12	765.0	42.6	5.9	66	NE	.....	.....	1	.....	10	.....	.....	0	0	Covered	Normal School.
Lorient	.....	.....	30.16	766.1	46.4	8.0	72	SSW	.....	.....	1	.....	10	.....	.....	0.276	7.0	Light rain	Naval Observatory.
Mâcon	.....	.....	30.01	762.8	42.3	5.7	78	Calm	.....	.....	0	.....	10	.....	.....	0	0	Covered	Normal School.
Metz	.....	.....	30.16	766.0	41.0	5.0	75	WNW	.....	.....	2	2c	.....	W	.....	0.024	0.6	.....	M. Schuster.
Mirecourt	.....	.....	30.09	764.2	38.5	3.6	80	W	.....	.....	2	.....	5	.....	NE	0	0	Partly cov'd	Normal School.
Nismes	.....	.....	30.00	761.9	53.6	12	52	NW	.....	.....	2	.....	0	.....	.....	0	0	Clear	Normal School.
Orleans	.....	.....	30.10	764.5	41.4	5.2	87	N	.....	.....	1	.....	8	.....	NNE	0.094	2.4	Very cloudy	Normal School.
Paris, Observatory	.....	.....	30.13	765.3	41.0	5.0	97	S	.....	.....	1	.....	10k	.....	SW	0	0	Light fog	National Observatory.
Parthenay	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Privas	.....	.....	30.07	763.6	47.8	8.8	.....	NNW	.....	.....	2	.....	2	.....	NNW	0	0	Slightly cl'dy	Normal School.
Rochefort, Observatory	.....	.....	30.14	765.5	50.0	10.0	72	WNW	.....	.....	3	.....	10	.....	SE	0.197	5.0	Covered	Naval Observatory.
Rouen	.....	.....	30.07	763.6	39.6	4.2	87	W	.....	.....	2	.....	10	.....	.....	0	0	Covered	Normal School.
Saint Lo	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Tarbes	29.15	740.4	30.25	768.3	52.7	11.5	75	W	.....	.....	4	.....	5	.....	E	0.55	14.	Cloudy	Normal School.
Villefranche	.....	.....	30.14	765.5	41.4	5.2	84	NW	.....	.....	1	.....	10	.....	.....	0	0	Covered	Normal School.
SUB-SERIES.																			
Fort de France, Martinique	.....	.....	29.91	759.7	75.2	24	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	L'Abbé Marchési.
Marseilles	.....	.....	29.96	760.9	51.4	10.8	40	NW	.....	.....	1	.....	0	.....	.....	0	0	Clear	Marseilles Observatory.
Mont-Louis	24.84	630.8	30.15	765.8	29.5	— 1.4	60	NNW	13.0	5.83	.....	.....	6	.....	NW	0.031	0.8	.....	—, Falguère.
Montsouris, Paris	.....	.....	30.11	764.8	40.6	4.8	82	SW	.....	.....	1	.....	10	.....	.....	Inap.	Inap.	.....	Montsouris Observatory
Perpignan	.....	.....	30.11	764.7	50.4	10.2	50	NW	35.4	15.83	.....	.....	1	.....	NW	0	0	.....	Dr. Fines.
Pic du Midi, (Summit,) H. P.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. Baylac.
Pic du Midi, (Plantade,) H. P.	22.45	570.2	.....	.....	17.6	— 8.0	.....	S	.....	.....	4	.....	10	.....	.....	1.947	49.4	Snowy	General de Nansouty.
Saint Maur, (near Paris)	.....	.....	30.12	765.1	39.4	4.1	96	SSW	.....	.....	1	.....	10	.....	.....	0	0	Covered	E. Renou.
Toulouse	.....	.....	30.24	768.1	46.0	7.8	68	WSW	.....	.....	3	.....	9	.....	.....	0.016	0.4	.....	Toulouse Observatory.
Tours	.....	.....	30.13	765.4	45.5	7.5	81	WNW	.....	.....	1	.....	7	.....	NW	0.150	3.8	.....	C. Marquet.
Versailles, (near Paris)	.....	.....	30.12	765.0	39.6	4.2	90	WNW	.....	.....	1	.....	10	.....	.....	0.007	0.17	Covered	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai)	.....	.....	30.54	775.6	23.9	— 4.5	79	WNW	3.4	1.50	.....	.....	0	.....	.....	0	0	.....	Marc Dechevrens, S. J.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—Generally, the originals give the wind-force by the scale 0 to 7; no distinction between upper and lower clouds, and, in the official series, the amount by the scale 0 to 4; the rain-fall as measured at 7, 8 or 9 a. m., local time; at Clermont, 9 a. m. of the following day; the weather in general terms as published. The elevation of Clermont is 388 meters, or 1,272.9 feet; Commune de Gréasque, 322 meters, or 1,056.4 feet; Tarbes, 308 meters, or 1,010 feet; Mont-Louis, 1,586.40 meters, or 5,204.8 feet; Pic du Midi, (Summit,) 2,877 meters, or 9,439.1 feet; Pic du Midi. Plantade,) 2,966 meters, or 7,762.6 feet. In correcting the Mont-Louis barometric observations for altitude, the constant 135. millimeters has been added. * Bouches-du-Rhône

GERMAN SERIES.

Furnished by the coöperation of Professor Dr. G. Neumayer, Director of the German Naval Observatory, Hamburg.

Bamberg	.....	.....	30.06	763.5	39.2	4.0	75	W	.....	.....	1	.....	10	.....	.....	0	0	.....	Prof. T. Hoh.
Berlin	.....	.....	30.15	765.9	33.8	1.0	79	NE	.....	.....	2	.....	10	.....	.....	0.008	0.2	.....	Prof. Arndt.
Breslau	.....	.....	30.08	764.1	31.3	— 0.4	100	NNW	.....	.....	3	.....	10	.....	.....	0.085	0.9	Snowing	Royal University Obs'y.
Carlsruhe	.....	.....	30.08	764.1	41.7	5.4	81	S	.....	.....	1	.....	10	.....	.....	0.433	11.0	.....	A. Senz.
Cassel	.....	.....	30.07	763.7	38.7	3.7	85	E	.....	.....	1	.....	5	S	.....	0	0	.....	Dr. H. Möhl.
Crefeld	.....	.....	30.06	763.4	38.3	3.5	87	NW	.....	.....	1	.....	10	.....	.....	0.04	1.	Foggy	Director Lose.
Emden	.....	.....	30.24	768.2	35.4	1.9	64	E	.....	.....	2	.....	10	.....	.....	0.008	0.2	.....	Prof. Prestel.
Frankfort on the Main	.....	.....	30.11	764.9	38.8	3.8	73	SW	.....	.....	1	.....	8	.....	.....	0.063	1.6	.....	Physical Society.
Friedrichshafen	28.64	727.4	30.11	764.9	40.3	4.6	75	SW	.....	.....	4	.....	8	.....	.....	0	0	.....	M. Wilhelm.
Hamburg	.....	.....	30.14	765.6	33.3	0.7	76	E	.....	.....	3	.....	9k,8	ENE	.....	0	0	.....	Captain F. Hegemann.
Kiel	.....	.....	30.13	765.4	31.8	— 0.1	73	NE	.....	.....	2	.....	10	.....	.....	0	0	.....	Prof. G. Karsten.
Königsberg, (Prussia)	.....	.....	30.14	765.5	23.4	— 4.8	89	E	.....	.....	2	.....	10	.....	.....	0.039	1.0	Snowing	Prof. E. Luther.
Koslin	.....	.....	30.13	765.3	31.1	— 0.5	.....	NE	.....	.....	1	.....	10	.....	.....	0	0	.....	H. Müller.
Leipsic	.....	.....	30.12	765.0	32.7	0.4	94	NE	.....	.....	1	.....	10	.....	.....	0	0	.....	Prof. Bruhns.
Memel	.....	.....	30.20	767.1	20.1	— 6.6	92	E	.....	.....	3	.....	Fog	.....	.....	0.091	2.3	Light snow	Reinbrecht & Skalweit.
Münster	.....	.....	30.00	762.0	38.3	3.5	89	N	.....	.....	1	.....	10	.....	.....	0.157	4.0	.....	Prof. E. Heis.
Neufahrwasser	.....	.....	30.13	765.3	28.2	— 2.1	81	E	.....	.....	1	.....	10	.....	.....	0	0	Smoke-haze	A Lothe.
Posen	.....	.....	30.11	764.7	31.1	— 0.5	91	N	.....	.....	2	.....	10	.....	.....	0	0	.....	Dr. Magener.
Strasburg, (in Alsace)	.....	.....	30.11	764.9	41.4	5.2	72	SSW	.....	.....	1	.....	4	SW	.....	0.055	1.4	.....	Dr. Schur.
Stuttgart	.....	.....	30.08	764.0	40.1	4.5	73	N	.....	.....	1	.....	8	.....	.....	0.024	0.6	.....	Prof. Schoder.
Thorn	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Dr. Hasenbalg.
Treves, (Trier)	.....	.....	30.03	762.5	41.2	5.1	83	NW	.....	.....	2	.....	10	.....	.....	Inap.	Inap.	Foggy	Prof. Flesch.
Weissenburg, (Bavaria)	28.52	724.4	30.09	764.2	35.1	1.7	90	W	.....	.....	2	.....	10	.....	.....	0.051	1.3	.....	Dr. von Bebber.
Wustrow, Naval School	.....	.....	30.16	766.1	32.0	0.0	98	ESE	.....	.....	2	.....	10	.....	.....	0	0	.....	E. F. Schütz.
GERMAN NAVAL SERIES.																			
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—The elevation of Friedrichshafen is 413.4 meters, or 1,356 9 feet; Weissenburg, 431 meters, or 1,414.0 ft. In the originals the distinction between the amount of upper and lower clouds is not made. It is not always certain that the remarks in the weather column refer to the moment of observation.

GREEK SERIES.

Furnished by the coöperation of Professor Dr. J. F. Julius Schmidt, Director of the Royal Observatory at Athens.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Athens			29.91	759.8	63 0	17.2		SW										Clear & dusty	

Note.—The originals give the barometer corrected, but not reduced to sea-level; occasionally the kind of clouds; the weather as published. They omit the humidity, wind-force, amount of cloudiness and rain-fall.

ITALIAN SERIES.

Furnished by the cooperation of His Excellency the Minister of Agriculture, Industry and Commerce, and the respective Observers.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Udine			29.88	759.0	49.5	9.7	67	Calm	0	0			10			0.024	0.6	Light rain	Prof. Giovanni Godi
Stelvio	21.93	557.1			15.4	— 9.2		SE			1		1	W		0	0		Signora Ernesta Manfredi.
Valdobbia	21 97	558.0			18.7	— 7.4	69	W			1		1	N		0	0		Ab. Dom. Mongini.
Padua			29.88	759.0	51.6	10.9	61	W	12.7	5.6			1			0	0		Prof. Dott. Lorenzoni.
Vicenza			29.89	759.2	50.4	10.2	58	N	0	0			1			0	0		Conte Alm. Da Schio.
Verona			29.89	759.1	51.3	10.7	78	W			2		0			0	0		Dott. B. Bertoncelli.
Bergamo	28.54	724.9	29.90	759.4	47.1	8.4	55	SW			2		0			0	0		Prof Trionfini Carlo.
Domodossola			29.94	760.5	47.1	8.4	52	Calm			0		2			0	0		Prof. Giuseppe Cazzi.
Milan			29.94	760.5	45.5	7.5	90	WNW			1		2			0	0		Ab. Gio. Capelli.
Pavia			29.93	760.3	44.4	6.9	65	SW			4		1	NW		0	0		Prof. Gio. Cantoni.
Moncalieri			29.97	761.1	44.1	6.7	64	NNW	0	0			0			0	0		Prof. P. F. Denza.
Mondovi	28.00	711.3	29.98	761.6	42.8	6.0	44	NW			2		0			0	0		Prof. D. C. Bruno.
Porto Maurizio			29.95	760.7	54.9	12.7	40	E			4		1			0	0		Prof. L. Vassallo.
Genoa			29.91	759.7	55.4	13.0	30	N	0	0			0			0	0		Prof. G. M. Garibaldi.
Piacenza			29.94	760.4	41.5	5.3	87	NW	7.4	3.3			1	NW		0	0		Dott. G. Manzi.
Parma			29.99	761.7	46.8	8.2	70	SW			2		0			0	0		Prof. P. Pigorini.
Florence			29.91	759.8	50.0	10.0	87	NE			2		7			0.091	2.3	Light rain	Cav. F. Meucci.
Leghorn			29.89	759.1	53.2	11.8	56	E	9.	4.2			1			0	0		Prof. P. Monte.
Siena	28.67	728.3	29.91	759.8	47.8	8.8	63	ENE	0.7	0.3			4	W		0	0		Prof. L. Toscani.
Urbino	28.30	718.8	29.91	759.6	45.3	7.4	81	NE			2		10			0.118	3.0	Raining	Prof. P. Serpieri.
Pesaro			29.91	759.7	47.3	8.5	83	NW	22.7	10.3			10	NE		0.110	2.8	Raining	Prof. Luigi Guidi.
Ancona			29.92	760.0	49.6	9.8	72	S			2		10			0.366	9.3	Raining	Prof. F. De— Bosis.
Grosseto			29.89	759.3	53.8	12.1	74	NE			2		5	NW		0.055	1.4	Raining	Avv. P. Ponticelli.
Rome			29.85	758.1	50.4	10.2	73	N	7.4	3.3			5	SSW		0	0		Prof's. P. Secchi & L. Respighi.
Naples, O. U			29.84	758.0	54.9	12.7	68	NE			1		10	SW		0.197	5.0	Raining	Prof. L. Palmieri.
Lecce			29.89	759.3	56.8	13.8	69	WNW	4.9	2.2			8	S		0.23	5.9	Raining	Prof. C. De—Giorgi.
Cosenza			29.87	758.6	57.2	14.0	73	ENE	7.4	3.3			7			0	0		Prof. F. D. Conti.
Cagliari																			Prof. A. Pacinotti.
Ptiposto, (Sicily)			29.84	758.0	57.4	14.1	58	SE			2		5			0	0		Prof. F. Cafiero.
Palermo			29.84	758.0	58.5	14.7	51	W	7.	3.3			9			0	0		Prof. G. Cacciatore.
Caltanissetta	27.91	708.9	29.90	759.5	49.8	9.9	67	SW			2		10	SE		0	0		Prof. A. Pagani.
Siracusa			29.83	757.7	57.6	14.2	65	SSW			2		10	SSW		0	0		Prof. V. Giuliano.
Sub-Series.																			
Naples, S. R			29.88	759.0	52.2	11.2	75	SW	0	0			10	W		0.122	3.1		Prof. F. Brioschi

Note.—The originals give the wind-force by the scale 0 to 4, or the velocity in kilometers per hour; generally, no distinction between upper and lower clouds; occasionally the weather by the Vienna symbols. The elevation of Stelvio is 2,543.0 meters, or 8,342.9 feet; Valdobbia, 2,548.0 meters or 8,359.3 feet; Bergamo, 379.6 meters, or 1,245.3 feet; Mondovi, 556 meters, or 1,824.2 feet; Siena, 348.5 meters, or 1,143.3 feet; Urbino, 451 meters, or 1,479.7 feet; Caltanissetta, 570.3 meters, or 1,871.0 feet.

Furnished by the coöperation of the Imperial University of Tokei, Japan.

JAPANESE SERIES.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Tokei			29.90	759.4	34	1.1		Calm	0	0			0			0	0		Prof. P. V. Veeder.

Note.—The originals give the amount of cloudiness by the scale 0 to 4 without distinguishing between upper and lower clouds. The rain-fall is measured at 7 a. m., local time.

By authority of the Secretary of Public Works.

MEXICAN SERIES.

Furnished by the coöperation of Senor Mariano Barcena, Director of the Central Meteorological Observatory in the City of Mexico.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Mexico																			Mariano Barcena. Vicente Reyes. Miguel Perez. (Engineers in charge.)

Note.—The elevation of Mexico is 2,290 meters, or 7,512.9 feet. The rain-fall is measured at 6 a. m., local time.

NETHERLANDS' SERIES.

Furnished by the cooperation of Professor Buys Ballot, Director of the Royal Meteorological Institute of the Netherlands at Utrecht.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Flushing			30.09	764.3	43.5	6.4		S			1					0.014	0.6		
Groningen			30.05	763.3	33.4	0.8		E			3					0.028	0.7		
Helder			30.08	764.0	36.3	2.4		E			1					0	0		
Utrecht			30.04	763.1	38.3	3.5	83	NNW			2		10			0	0	Dull	

Note.—The originals give the wind-pressure in kilograms per square meter; for Utrecht, they give the weather as published, from which the amount of cloudiness is taken by the scale 0 to 4, without distinguishing between upper and lower clouds. It is assumed that the barometer readings have been reduced to sea-level.

NORWEGIAN SERIES.

Furnished by the coöperation of Professor H. Mohn, Director of the Royal Norwegian Meteorological Institute at Christiania.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Bergen			30.24	768.2	20.5	— 6.4	79	S	2.5	1.1			0			0	0		
Brönö			30.24	768.2	21.6	— 5.8	45	SE	8.9	4			1						
Christiania			30.43	772.8	3.2	—16.0	81	ENE	2.7	1.2			0			0	0		
Tromsö			30.04	763.0	31.3	— 0.4	74	SW	26.8	12			10			0	0		

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols. The cloudiness and weather at Bergen refer to 2h., p. m., local time, instead of 1h., 4 min.

PORTUGUESE SERIES.

Furnished by the coöperation of J. C. de Brito Capello, Director of the Meteorological Observatory of the Infante Don Luiz at Lisbon.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Angra, (Azores)	.....	.....	30.17	766.2	59 4	15.2	87	WSW	9.8	4.4	.....	.....	8	.....	.....	0.039	1.0	Raining.....	Dr. J. A. Sampaio.
Campo Major	.....	.....	30.33	770.4	55.4	13.0	79	WNW	8.1	3.6	.....	.....	4	WNW	.....	0.035	0.9	.....	Dr. A. M. R. dos Santos.
Funchal, (Madeira)	.....	.....	30.37	771.3	59.7	15.4	66	ENE	6.3	2.8	.....	.....	8	.....	.....	0	0	.....	Capt. D. A. de Cunha.
Lisbon	.....	.....	30.40	772.1	54.7	12.6	86	NW	6.3	2.8	.....	.....	9	.....	.....	0.031	0.8	.....	The Observatory.
Ponta Delgada, (Azores)	.....	.....	30.27	768.8	60.8	16.0	77	SW	16.1	7 2	.....	.....	4	.....	.....	0.008	0.2	.....	

Note.—The originals give the wind-velocity in kilometers per hour; occasionally, the weather by the Vienna symbols; the amount of cloudiness without distinguishing between upper and lower clouds; the barometer corrected but not reduced to sea-level. The rain-fall at Lisbon is measured at noon, instead of 0 h. 6 m., p. m.

RUSSIAN SERIES.

Furnished by the cooperation of Professor H. Wild, Director of the Imperial Central Physical Observatory of Russia, at St. Petersburg.

Warsaw	.....	.....	30.04	763.0	30.7	— 0.7	94	ESE	7	3	.....	.....	10	.....	.....	.....	.....	Snowing.....	Astronomical Obs.
Wilna	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Astronomical Obs.
Dorpat	.....	.....	30.52	775.2	9.1	—12.7	93	ESE	7	3	.....	.....	0	.....	.....	.....	.....	.....	Physical Cabinet.
St. Petersburg	.....	.....	30.68	776.6	2.3	—16.5	93	SSE	2	1	.....	.....	0	.....	.....	.....	.....	Light fog.....	Central Physical Obs.
Kuopio	.....	.....	30.50	774.6	— 4.9	—20.5	100	Calm	0	0	.....	.....	0	.....	.....	.....	.....	.....	Ch. Forsten.
Kieff	.....	.....	30.22	767.6	18.5	— 7.5	97	ENE	11	5	.....	.....	10	.....	.....	.....	.....	Snowing.....	Physical Cabinet.
Nikolaiev	.....	.....	30.11	764.8	32.5	0.3	89	NE	22	10	.....	.....	10	.....	.....	.....	.....	.....	Kurdakof.
Kertch	.....	.....	30.02	762.4	38.3	3.5	93	NE	13	6	.....	.....	10	.....	.....	.....	.....	Raining.....	Lagorio.
Moscow	.....	.....	30.66	778.8	2.5	—16.4	85	NNW	9	4	.....	.....	0	.....	.....	.....	.....	.....	Meteorological Obs.
Lugan	.....	.....	30.23	767.8	17.6	— 8.0	80	ENE	27	12	.....	.....	10	.....	.....	Blank	lank	.....	Meteorological Obs.
Archangel	.....	.....	30.23	767.9	10.0	—12.2	95	W	9	4	.....	.....	10	.....	.....	.....	.....	.....	Ogorodnikof.
Tiflis	28.57	725.7	29.98	761.6	56.3	13.5	21	N	9	4	.....	.....	9	.....	.....	.....	.....	.....	Physical Observatory.
Astrakhan	.....	.....	30.23	767.7	24.6	— 4.1	84	NE	16	7	.....	.....	10	.....	.....	.....	.....	.....	Sebastianof.
Kasan	.....	.....	30.26	768.7	9.7	—12.4	85	WNW	4	2	.....	.....	10	.....	.....	.....	.....	Light snow..	Physical Cabinet.
Orenburg	.....	.....	30.29	769.3	— 7.4	—21.9	62	E	13	6	.....	.....	0	.....	.....	.....	.....	.....	Tschernischef.
Ekaterinburg	28.93	734.8	29.96	760.9	9.5	—12.5	81	WSW	22	10	.....	.....	10	.....	.....	.....	.....	.....	Meteorogical Obs.
Nukuss	.....	.....	30.02	762.5	37.0	2.8	62	ENE	4	2	.....	.....	6	.....	.....	.....	.....	.....	
Kasaly	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Bobrof.
Tashkend	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Michelson.
Barnaul	.....	.....	30.26	768.7	16.2	— 8.8	72	SW	4	2	.....	.....	10	.....	.....	.....	.....	.....	Meteorological Obs.
Yeniseisk	.....	.....	29.97	761.3	5.2	—14.9	75	SE	9	4	.....	.....	10	.....	.....	.....	.....	Snowing.....	Marks.
Irkutsk	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Usolzef.
Peking, (China)	.....	.....	30.47	773.8	20 5	— 6.4	45	NW	16	7	.....	.....	0	.....	.....	.....	.....	.....	Physical Observatory.
Nertchinsk	28.11	713.9	30.49	774.5	—17.1	—27.3	79	Calm	0	0	.....	.....	0	.....	.....	.....	.....	.....	Meteorological Obs.
Vladivostock	.....	.....	30.14	765.5	— 8.3	—22.4	92	Calm	0	0	.....	.....	0	.....	.....	.....	.....	.....	
Nikolaievsk, on the Amoor	.....	.....	.....	.....	19.0	— 7.2	.....	NE	16	7	.....	.....	10	.....	.....	.....	.....	.....	

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols; they omit the rain-fall. The elevation of Tiflis is 409 meters, or 1,341.8 feet; Ekaterinburg, 306. 4 ? m., or 1,005.2 ? ft.; Tashkend, 494.2 ? m., or 1,621.3 ? ft.; Irkutsk, 392 m., or 1,286 ft.; Nertchinsk, 592.0 ? m., or 1,942.2 ? ft.

SPANISH SERIES.

Furnished by the coöperation of Antonio Aguilar, Director of the Royal Observatory at Madrid, and of Don Cecilio Pujazon, Captain R. N. Director of the Naval Observatory at San Fernando.

Madrid	.....	.....	30.34	770.5	45.1	7.3	72	E	1.5	0.67	.....	3	1	N	.....	0	0	Light clouds	Royal Observatory.
San Fernando	.....	.....	30.39	771.8	56.3	13.5	72	N	6.5	2.9	.....	3	0	N	.....	0	0	.....	Naval Observatory.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Note.—The originals give the weather in general terms, as published; rain-fall for San Fernando from preceding to following midnight; wind-velocity for Madrid in kilometers per hour.

SWEDISH SERIES.

Furnished by the coöperation of Professor R. Rubenson, Director of the Royal Swedish Meteorological Institute, at Stockholm, and of Dr. H. H. Hildebrandsson, Chief of the Meteorological Division of the Upsala Observatory.

Haparanda	.....	.....	30.34	770.7	— 7.2	—21.8	85	S	.....	.....	2	.....	0	.....	.....	0	0	.....	
Umea	.....	.....	30.45	773.5	— 8.7	—22.6	84	Calm	.....	.....	0	.....	0	.....	.....	0	0	.....	
Hernosand	.....	.....	30.45	773.3	— 9.4	—23.0	92	NNE	.....	.....	2	.....	0	.....	.....	0	0	.....	
Stockholm	.....	.....	30.31	769.8	18.0	— 7.8	89	NNE	.....	.....	4	.....	1	.....	.....	0	0	.....	
Wisby	.....	.....	30.25	768.3	26.2	— 3.2	87	E	.....	.....	4	.....	9	.....	.....	0	0	.....	
Sub-Series.																			
Upsala	.....	.....	30.40	772.1	10.8	—11.8	100	N	5.4	2.4	.....	.....	0	.....	.....	0.000	0.01	.....	Dr. Hildebrandsson.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Note.—The originals give the wind-force by the scale 0 to 6, and Upsala also velocity in meters per second; occasionally, the weather by the Vienna symbols, or in genera terms; no distinction between the amount of upper and lower clouds. The rain- all is measured at 8 a. m., local time.

SWISS SERIES.

Furnished by the coöperation of Professor R. Wolf, Director of the Observatory at Zurich, and of Professor E. Plantamour, Director of the Observatory at Geneva.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Geneva	28.66	727.9	30.13	765.4	38.1	3.4	70	E	.....	.....	1	.....	7	.....	.....	0	0	Clouds	The Observatory.
Zurich	28.43	722.1	30.13	765.2	36.7	2.6	75	E	.....	.....	1	.....	5	.....	.....	0	0	Cloudy	The Observatory.

Note.—For Geneva the corresponding departures from the normal values are: Barometer, +0.2 mm; Thermometer, +2.0 cent.; Relative Humidity, —0 per cent.

Note.—The rain-fall is measured at Zurich at 7 a. m. on the following day. The originals give the barometer corrected but not reduced to sea-level; the wind-force by the scale 0 to 4 for Zurich; the amount of cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The elevation of Geneva is 408 meters, or 1,339 feet, and that of Zurich 470 meters, or 1,542 feet.

TURKISH SERIES.

Furnished by the coöperation of A. Coumbary, Effendi, Director of the Central Observatory at Constantinople, and of Professor C. V. A. Van Dyck, Superintendent of the Lee Observatory at Beirut.

Constantinople	.....	.....	29.89	759.3	54.7	12.6	90	WSW	9	4.0	.....	.....	10	.....	WSW	1.114	28.3	.....	
Fao, (Persian Gulf)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Salonica	.....	.....	29.92	759.9	66.7	19.3	.....	SW	.....	.....	1	.....	0	.....	.....	.....	.....	.....	
Valona	.....	.....	29.87	758.8	56.3	13.5	.....	W	.....	.....	1	.....	10	.....	.....	Blank	Blank	.....	
Varna	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y	.....	.....	30.17	766.3	65.5	18.6	72	SW	.....	.....	3	.....	10s	.....	SW	0	0	Overcast	Prof. C. V. A. Van Dyck.

Note.—The originals give the wind-force by the scale 0 to 7, (except Beirut, by the scale 0 to 12, and Constantinople velocity in meters per second;) the weather in general terms as published; no distinction between upper and lower clouds, and, except Constantinople and Beirut, the amount by the scale 0 to 4. It is assumed that the barometer is reduced to sea-level.

CANADIAN SERIES.

Furnished by the coöperation of Professor G. T. Kingston, Director of the Magnetic Observatory at Toronto, and Superintendent of the Meteorological Office of the Dominion of Canada, and the respective Observers. Those marked with a star (*) are also telegraphed daily to the office of the Chief Signal Officer, U. S. Army.

Bathurst, N. B	.....	.....	29.94	760.5	— 6.5	—21.4	80	Calm	0	0	.....	.....	10	.....	.....	0	0	.....	Hon. J. Ferguson.
Brockville, Ontario	.....	.....	30.17	766.3	—17	—27.2	.....	Calm	0	0	.....	0	0	.....	.....	0.50	12.7	Clear	W. R. Bigg.
*Chatham, N. B	.....	.....	29.95	760.7	— 8	—22.2	100	W	3	1.3	.....	.....	10n	.....	W	0.06	1.5	Light snow	G. A. Blair.
Charlottetown, P. E. Island	.....	.....	29.99	761.7	— 1	—18.3	84	Calm	0	0	.....	.....	10n	.....	.....	0.08	2.0	Light snow	H. J. Cundall, C. E.
Cornwall, Ontario	.....	.....	30.11	764.8	—19.4	—28.6	100	E	.....	.....	1	0	4s	.....	.....	0	0	Fair	James Smith, M. A.
Dalhousie, N. B	.....	.....	29.97	761.2	.....	.....	.....	W	.....	.....	1	.....	.....	.....	.....	0.03	0.8	Overcast	H. A. Johnson.
Esquimault, B. C	.....	.....	30.34	770.6	36.1	2.3	96	N	.....	.....	.....	5cs	0	.....	.....	0	0	Cloudy	W. H. Bevis.
Fredericton, N. B	.....	.....	29.97	761.2	— 6.6	—21.4	96	Calm	0	0	.....	.....	10n	.....	.....	0.095	2.41	Snowing	Prof. Harrison.
*Fort Garry, Manitoba	.....	.....	29.56	750.8	8	—13.3	91	W	14	6.3	.....	.....	10n	.....	.....	0	0	Cloudy	James Stewart.
Goderich, Ontario	.....	.....	30.15	765.8	9.2	—12.7	88	SW	.....	.....	3	10k	0	SW	.....	0	0	.....	H. J. Strang, M. A.
Granton, Ontario	28.96	735.3	30.18	766.6	0.7	—17.4	.....	S	.....	.....	1	.....	1m	.....	.....	0	0	Cloudy	James Grant.
*Halifax, N. S	.....	.....	29.90	759.4	7	—13.9	95	NE	8	3.6	.....	.....	10n	.....	.....	0.320	8.13	Heavy snow	F. Allison, M. A.
Hamilton, Ontario	.....	.....	30.21	767.3	3.2	—16.0	88	SW	.....	.....	3	0	0	.....	.....	0	0	Clear	G. Dickson.
Heart's Content, N. F	.....	.....	30.05	763.3	5	—15.0	100	W	.....	.....	4	3k	0	W	.....	0.01	0.3	Fine	E. Weedon.
*Kingston, Ontario	.....	.....	30.20	767.1	—15	—26.1	82	SE	1	0.4	.....	2c	0	.....	.....	0.14	3.6	Clear	S. Woods, M. A.
*Montreal, Quebec	.....	.....	30.06	763.5	—15	—26.1	94	SW	16	7.2	.....	0	0	.....	.....	0.14	3.6	Clear	C. H. McLeod, C. E.
*Ottawa, Ontario	.....	.....	30.14	765.5	—20	—28.9	79	SW	4	1.8	.....	2cs	0	W	.....	0.20	5.1	Clear	J. B. Haney.
*Parry Sound, Ontario	.....	.....	30.01	762.2	— 3	—19.4	76	S	5	2.2	.....	.....	10n	.....	S	0.04	1.0	Light snow	Rev. R. Mosley.
Port Dover, Ontario	.....	.....	30.23	767.8	0	—17.8	91	SW	4	1.8	.....	2k	0	SW	.....	0.09	2.3	Fair	H. Morgan.
Port Hastings, N. S	.....	.....	30.02	762.5	1.7	—16.8	.....	Calm	0	0	.....	.....	.....	.....	.....	0.40	10.2	Fine	Peter Grant.
Port Stanley, Ontario	.....	.....	30.26	768.6	3	—16.1	94	W	12	5.4	.....	.....	10n	.....	W	0.06	1.5	Cloudy	M. Payne.
*Quebec, Quebec	.....	.....	29.94	760.5	— 8	—22.2	58	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	Capt. Ashe, R. N.
*Rockliffe, Ontario	.....	.....	30.04	763.0	—24	—31.1	100	E	4	1.8	.....	.....	8s	.....	SW	0.01	0.3	Cloudy	
St. John, N. B	.....	.....	29.98	761.5	— 3	—19.4	100	NE	5	2.2	.....	.....	10n	.....	.....	0.310	7.87	Snowing	G. Murdoch, C. E.
*Saugeen, Ontario	.....	.....	30.01	762.2	13	—10.6	61	SW	20	8.9	.....	10k	0	SW	.....	0.04	1.0	Cloudy	K. Stewart.
Stayner, Ontario	.....	.....	30.07	763.8	9	—12.8	76	W	4	1.8	.....	.....	10ks	.....	N	0	0	Cloudy	R. J. Cole.
Stratford, Ontario	28.76	730.5	30.20	767.1	— 0.5	—18.1	94	S	8	3.6	.....	.....	10s	.....	.....	0	0	Cloudy	C. J. MacGregor, M. A
*Sydney, C. B	.....	.....	30.07	763.8	3	—16.1	97	S	4	1.8	.....	.....	10n	.....	.....	0.01	0.3	Light snow	T. C. Hill.
*Toronto, Ontario	.....	.....	30.15	765.8	5	—15.0	90	SW	15	6.7	.....	5cs	Haze	W	.....	0.17	4.3	Fair	Magnetic Observatory.
Woodstock, Ontario	.....	.....	30.26	768.6	— 0.3	—17.9	87	W	12	5.4	.....	.....	10s	.....	.....	0.01	0.3	Cloudy	J. Montgomery.
Sub-Series.																			
St. Johns, Newfoundland	.....	.....	30.12	765.0	— 1.5	—18.6	.....	W	.....	.....	.....	10k	10s	.....	.....	0.02	0.5	Fair	John Delany.

Note.—The originals for Brockville, Charlottetown, Port Dover, Port Stanley, Stayner, St. Johns, N. F. and those telegraphed, give the amount of cloudiness by the scale 0 to 4. The elevation of Granton is 1,015 feet, or 309.4 m.; Stratford, 1,182 feet, or 360.3 m.

UNITED STATES SERIES.

Furnished by the coöperation of Bvt. Brig. Gen. Albert J. Myer, Chief Signal Officer, U. S. Army.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Albany, N. Y.	.....	.....	30.07	763.8	6	—14.4	74	NW	18	8.0	.....	0	2s	.....	.....	0.15	3.8	Fair	
Alpena, Mich.	.....	.....	29.95	760.7	5	—15.0	75	SW	10	4.5	.....	0	0	.....	.....	0.17	4.3	Clear	
Atlantic City, N. J.	.....	.....	30.00	762.0	31	— 0.6	89	NW	8	3.6	.....	5cs	5s	W	NW	0.03	0.8	Cloudy	
Augusta, Ga.	.....	.....	30.24	768.1	52	11.1	96	Calm	0	0	.....	.....	10s	.....	.....	0	0	Cloudy	
Baltimore, Md.	.....	.....	30.03	762.7	41	5.0	73	NW	16	7.2	.....	2ck	5s	W	.....	0.09	2.3	Clearing	
Barnegat, N. J.	.....	.....	29.98	761.5	20	— 6.7	94	NW	13	5.8	.....	.....	10s,hs	.....	NW	0.18	4.6	Cloudy	
Bismarck, Dakota	27.99	710.9	28.77	756.1	6	—14.4	76	SW	12	5.4	.....	.....	10s	.....	.....	0	0	Cloudy	
Boston, Mass.	.....	.....	29.84	757.9	12.5	—10.8	90	W	7	3.1	.....	.....	10s	.....	NW	0.17	4.3	Cloudy	
Breckenridge, Minn.	.....	.....	29.86	758.4	5	—15.0	75	W	32	14.3	.....	.....	10s	.....	SW	0	0	Cloudy	
Buffalo, N. Y.	.....	.....	30.18	766.6	7.0	—13.9	88	SW	16	7.2	.....	.....	10s	.....	SW	0.06	1.5	Cloudy	
Burlington, Vt.	.....	.....	30.09	764.3	—12	—24.4	75	NE	8	3.6	.....	0	8s	.....	.....	0.05	1.3	Cloudy	
Cairo, Ill.	.....	.....	30.44	773.2	19	— 7.2	84	N	6	2.7	.....	.....	10s	.....	.....	0.04	1.0	Cloudy	
Cape Hatteras, N. C.	.....	.....	30.08	764.0	52	11.1	93	SW	16	7.2	.....	5ck	Haze	W	.....	0	0	Fair	
Cape Henry, Va.	.....	.....	30.01	762.2	56	13.3	87	W	20	8.9	.....	8c	2s	W	.....	0	0	Cloudy	
Cape Lookout, N. C.	.....	.....	30.19	766.8	50	10.0	100	SW	23	10.3	.....	5ck	5s	SW	.....	0	0	Cloudy	
Cape May, N. J.	.....	.....	30.02	762.5	32	0.0	89	W	14	6.3	.....	.....	10s	.....	W	0.01	0.3	Cloudy	
Charleston, S. C.	.....	.....	30.25	768.3	60	15.6	94	SW	10	4.5	.....	5c	0	W	.....	0.01	0.3	Fair	
Cheyenne, Wyoming	23.89	606.8	29.83	757.7	23	— 5.0	72	W	24	10.7	.....	0	0	.....	.....	0	0	Clear	
Chicago, Ill.	.....	.....	30.30	769.6	— 1	—18.3	68	SW	8	3.6	.....	0	0	.....	.....	0.24	6.1	Clear	
Cincinnati, Ohio	.....	.....	30.31	769.9	21	— 6.1	71	SE	2	0.9	.....	.....	10s	.....	NW	0.01	0.3	Cloudy	
Cleveland, Ohio	.....	.....	30.30	769.6	4	—15.6	74	S	4	1.8	.....	.....	10s	.....	.....	0.06	1.5	Cloudy	
Corsicana, Texas	.....	.....	30.46	773.7	24	— 4.4	75	NW	12	5.4	.....	.....	10s	.....	.....	Inap.	Inap.	Cloudy	
Davenport, Iowa	.....	.....	30.37	771.4	— 4	—20.0	82	SW	1	0.4	.....	.....	10s	.....	.....	0.01	0.3	Cloudy	
Denison, Tex.	.....	.....	30.49	774.4	18	— 7.8	83	N	8	3.6	.....	.....	10s	.....	N	0	0	Cloudy	
Denver, Col.	24.75	628.6	29.97	761.2	1	—17.2	72	S	1	0.4	.....	0	0	.....	.....	0	0	Clear	
Detroit, Mich.	.....	.....	30.21	767.3	6	—14.4	76	SW	8	3.6	.....	.....	10s	.....	.....	0.05	1.3	Cloudy	
Dodge City, Kan.	27.61	701.3	30.15	765.8	9	—12.8	77	SW	12	5.4	.....	.....	10s	.....	SW	0	0	Cloudy	
Dubuque, Iowa	.....	.....	30.27	768.8	—11	—23.9	52	Calm	0	0	.....	0	Haze	.....	.....	0	0	Clear	
Duluth, Minn.	.....	.....	29.68	753.9	1	—17.2	85	W	12	5.4	.....	.....	10s	.....	W	0	0	Cloudy	
Eastport, Me.	.....	.....	29.83	757.7	15	— 9.4	100	E	10	4.5	.....	.....	10n	.....	.....	0.20	5.1	Heavy snow	
Erie, Pa.	.....	.....	30.25	768.3	6	—14.4	76	SW	14	6.3	.....	.....	10s	.....	SW	0.05	1.3	Cloudy	
Escanaba, Mich.	.....	.....	29.91	759.7	— 3	—19.4	83	SW	12	5.4	.....	.....	10s	.....	.....	0.06	1.5	Cloudy	
Fort Gibson, Indian Ter.	.....	.....	30.46	773.7	10	—12.2	78	N	8	3.6	.....	8c	0	.....	.....	0.01	0.3	Fair	
Ft. St. Michael, Alaska	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Fort Sill, Indian Ter.	29.05	737.9	30.24	768.1	18	— 7.8	52	N..	2	0.9	.....	10cs	0	.....	.....	0	0	Cloudy	
Fort Sully, Dakota	28.24	717.3	30.11	764.8	— 6	—21.1	81	NW	2	0.9	.....	0	0	.....	.....	0	0	Clear	
Florence, Arizona	28.43	722.1	29.96	761.0	50	10.0	.....	Sw	.....	.....	.....	.....	10s	.....	SW	0	0	Cloudy	
Galveston, Tex.	.....	.....	30.30	769.6	40	4.4	91	N	30	13.4	.....	.....	10s	.....	.....	0.05	1.3	Cloudy	
Grand Haven, Mich.	.....	.....	30.13	765.3	16	— 8.9	83	W	27	12.1	.....	.....	10s	.....	.....	0.01	0.3	Cloudy	
Indianapolis, Ind.	.....	.....	30.36	771.1	15	— 9.4	83	SW	3	1.3	.....	5ck	2s,sm'	W	.....	0.03	0.8	Fair	
Indianola, Tex.	.....	.....	30.34	770.6	35	1.7	85	N	24	10.7	.....	.....	10s	.....	.....	0	0	Cloudy	
Jacksonville, Fla.	.....	.....	30.31	769.9	56	13.3	93	SE	2	0.9	.....	.....	Fog	.....	.....	0	0	Foggy	
Keokuk, Iowa	.....	.....	30.37	771.4	3	—16.1	73	SW	9	4.0	.....	.....	10s	.....	SW	0	0	Cloudy	
Key West, Fla.	.....	.....	30.24	768.1	71	21.7	90	NE	8	3.6	.....	0	5s	.....	.....	0	0	Fair	
Kittyhawk, N. C.	.....	.....	30.08	764.0	53	11.7	86	SW	16	7.2	.....	10cs	0	W	.....	0	0	Cloudy	
Knoxville, Tenn.	.....	.....	30.22	767.6	46	7.8	92	N	1	0.4	.....	.....	10s	.....	.....	0.21	5.3	Cloudy	
La Crosse, Wis.	.....	.....	30.16	766.1	— 6	—21.1	61	S	12	5.4	.....	0	0	.....	.....	0.51	13.0	Clear	
Leavenworth, Kan.	.....	.....	30.43	772.9	6	—14.4	88	S	6	2.7	.....	.....	10s	.....	.....	0	0	Cloudy	
Louisville, Ky.	.....	.....	30.34	770.6	21	— 6.1	85	Calm	0	0	.....	8cs	0	.....	.....	0.11	2.8	Cloudy	
Lynchburg, Va.	.....	.....	30.05	763.3	47	8.3	81	SW	2	0.9	.....	.....	10s	.....	.....	Inap.	Inap.	Cloudy	
Malone, N. Y.	.....	.....	30.06	763.5	—12	—24.4	90	S	5	2.2	.....	0	0	.....	.....	0.54	13.7	Clear	
Marquette, Mich.	.....	.....	29.74	755.4	5	—15.0	75	S	20	8.9	.....	0	0	.....	.....	0.02	0.5	Clear	
Memphis, Tenn.	.....	.....	30.38	771.6	30	— 1.1	80	N	8	3.6	.....	.....	10s	.....	NW	0.15	4.6	Cloudy	
Milwaukee, Wis.	.....	.....	30.26	768.6	— 8	—22.2	90	W	14	6.3	.....	0	0	.....	.....	0.03	0.8	Clear	
Mobile, Ala.	.....	.....	30.26	768.6	58	14.4	100	S	6	2.7	.....	.....	Fog	.....	.....	0.02	0.5	Dense fog	
Morgantown, W. Va.	.....	.....	30.24	768.1	69.8	16.1	94	S	8	3.6	.....	.....	10n	.....	SW	0.70	17.8	Light rain	
Mt. Washington, N. H.	29.15	740.4	30.28	769.1	22	— 5.6	72	W	5	2.2	.....	.....	10s	.....	W	0.31	7.9	Cloudy	
Nashville, Tenn.	23.10	586.7	29.46	748.3	—12	—21.4	100	NW	72	32.2	.....	.....	Fog	.....	.....	0	0	Foggy	
New Haven, Conn.	.....	.....	30.33	770.4	32	0.0	89	Calm	0	0	.....	.....	10ks	.....	NW	0.16	4.1	Cloudy	
New London, Conn.	.....	.....	29.94	760.5	20	— 6.7	70	NW	5	2.2	.....	5ck	0	NW	.....	0.15	3.8	Fair	
New Orleans, La.	.....	.....	29.92	760 0	10	— 7.2	89	NW	12	5.4	.....	2c	2cs	W	W	0.18	4.6	Fair	
Newport, R. I.	.....	.....	30.22	767.6	66	18.9	100	S	5	2.2	.....	.....	Fog	.....	.....	0.04	1.0	Dense fog	
New York, N. Y.	.....	.....	29.86	758.4	22	— 5.6	72	NW	16	7.2	.....	.....	10ks	.....	NW	0.17	4.3	Cloudy	
Norfolk, Va.	.....	.....	29.98	761.5	26	— 3.3	76	NW	18	8.0	.....	2ck	5ks	W	NW	0.12	3.0	Clearing	
North Platte, Neb.	27.13	689.1	30.02	762.5	54.5	12.5	80	SW	10	4.5	.....	8c	0	W	.....	Inap.	Inap.	Fair	
Omaha, Neb.	29 07	738.4	30.02	762.5	— 5	—20.6	82	NW	6	2.7	.....	0	0	.....	.....	0	0	Clear	
Oswego, N. Y.	.....	.....	30.29	769.4	3	—16.1	73	S	5	2.2	.....	0	0	.....	.....	0.02	0.5	Clear	
Punxsutawney, Pa.	.....	.....	30.15	765.8	3.8	—15.8	88	SE	7	3.1	.....	.....	10n	.....	.....	0.08	2.0	Light snow	
Philadelphia, Pa.	.....	.....	29.59	751.6	— 1	—18.3	84	W	12	5.4	.....	.....	10ks	.....	NW	0	0	Cloudy	
Pike's Peak, Col.	17.57	446.3	29.78	756.4	7	—13.9	100	SW	8	3.6	.....	.....	Fog	.....	.....	0.06	1.5	Fair	
Pittsburgh, Pa.	.....	.....	30.29	769.4	14	—10.0	84	NW	8	3.6	.....	2c	2s	W	.....	0	0	Foggy	
Port Huron, Mich.	.....	.....	30.19	766.8	8	—16.1	75	SW	10	4.5	.....	.....	10s	.....	NW	0.13	3.3	Cloudy	
Portland, Me.	.....	.....	29.82	757.4	6	—14.4	76	N	16	7.2	.....	.....	10n	.....	.....	0.09	2.3	Cloudy	
Portland, Oregon	.....	.....	30.36	771.1	30	— 1.1	89	NE	1	0.4	.....	.....	10n	.....	.....	0.32	8.1	Light snow	
Punta Rassa, Fla.	.....	.....	30.28	769.1	69.5	20.8	92	E	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Rochester, N. Y.	.....	.....	30.14	765.5	6	—14.4	76	W	18	8.0	.....	0	8s	.....	E	Inap.	Inap.	Fair	
Salt Lake City, Utah	25.73	653.5	30.06	763.5	14	—10.0	81	NW	2	0.9	.....	.....	10s	.....	W	0.06	1.5	Cloud,	
Sandy Hook, N. J.	.....	.....	29.97	761.2	27	— 2.8	85	NW	12	5.4	.....	0	0	.....	.....	0	0	Clear	
San Diego, Cal.	.....	.....	29.93	760.2	51	10.6	83	NW	8	3.6	.....	.....	10ks	.....	NW	0.07	1.8	Cloudy	
San Francisco, Cal.	.....	.....	30.03	762.7	44	6.7	90	N	22	9.8	.....	.....	10n	.....	NW	0.33	8.4	Light rain	
Santa Fé, N. M.	23.24	590.3	29.78	756.4	36	2.2	53	E	1	0.4	.....	0	0	.....	.....	0	0	Clear	
Savannah, Ga.	.....	.....	30.28	769.1	62	16.7	94	SW	5	2.2	.....	.....	10s	.....	.....	0	0	Cloudy	
Shreveport, La.	.....	.....	30.43	772.9	32	0.0	100	NW	6	2.7	.....	.....	10s	.....	.....	0.01	0.3	Cloudy	
Smithville, N. C.	.....	.....	30.23	767.8	50	10.0	93	W	8	3.6	.....	.....	10n	.....	.....	Inap.	Inap.	Light rain	
Springfield, Mass.	.....	.....	29.96	761.0	18	— 7.8	87	W	12	5.4	.....	2c	Fog	.....	.....	0.02	0.5	Foggy	
St. Louis, Mo.	.....	.....	30.43	772.9	12	—11.1	80	W	4	1.8	.....	.....	0	SW	.....	0.14	3.6	Fair	
St. Marks, Fla.	.....	.....	30.30	769.6	52	11.1	100	NW	1	0.4	.....	.....	10s	.....	.....	0.02	0.5	Cloudy	
St. Paul, Minn.	.....	.....	29.99	761.0	— 6	—21.1	61	Calm	0	0	.....	0	Fog	.....	.....	0	0	Foggy	
St. Paul's Island, Alaska	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Inap.	Inap.	Clear	
Thatcher's Island, Mass.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Toledo, Ohio	.....	.....	29.81	757.2	18	— 7.8	85	NW	24	10.7	.....	.....	10n	.....	N	0.14	3.6	Snowing	
Tucson, Arizona	.....	.....	30.24	768.1	12	—11.1	80	SW	8	3.6	.....	.....	10s	.....	SW	0.22	5.6	Cloudy	
Tybee Island, Ga.	27.50	698.5	30.05	763.3	40	9.4	.....	N	.....	.....	.....	.....	10ks	.....	W	0	0	Threatens	
Vicksburg, Miss.	.....	.....	30.26	768.6	53	11.7	100	SW	3	1.3	.....	.....	Fog	.....	.....	0	0	Foggy	
Virginia City, M. T.	24.30	617.2	29.78	756.4	3	—16.1	100	N	6	2.7	.....	.....	Fog	.....	.....	0.17	4.3	Foggy	
Washington, D. C.	.....	.....	30.04	763.0	39	3.9	85	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Wilmington, N. C.	.....	.....	30.20	767.1	53	11.7	71	N	9	4.0	.....	.....	8s	.....	W	0.06	1.5	Clearing	
	.....	.....	.....	.....	.....	.....	93	SW	9	4.0	.....	8cs	Fog	W	.....	0	0	Cloudy	

UNITED STATES SERIES.—CONTINUED.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Upper. 0—10.	Clouds. Amount. Low'r. 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Wood's Holl, Mass.	.....	.....	29.82	757.4	24	— 4.4	86	NW	15	6.7	.....	.....	10s	.....	NW	0.10	2.5	Cloudy	
Yankton, Dakota	28.77	730.7	30.23	767.8	— 5	—20.6	63	SW	2	0.9	.....	0	0	.....	.....	0	0	Clear	
Yuma, Arizona	.....	.....	29.96	761.0	53	11.7	.....	N	.....	.....	.....	5c	5s	N	N	0.02	0.5	Cloudy	
Sub-Series.																			
Kingston, Jamaica, W. I.	.....	.....	30.26	768.6	74	23.3	76	Calm	0	0	.....	2c	2s	.....	.....	0	0	.....	James Gall.
Navassa, W. I.	.....	.....	.....	.....	81	27.2	.....	NE	.....	.....	2	.....	.....	.....	.....	0	0	Clear	F. M. Everett.
Clifton, Ja., W. I.	27.27	692.6	30.09	764.3	63	17.2	78	Calm	0	0	.....	.....	.....	.....	.....	0	0	Fine, clear.	C. Partridge.
Paramaribo, D. Guiana, S.A.	.....	.....	30.02	762.5	82	27.8	83	E	.....	.....	2	5k	5k	E	.....	0	0	¼ cloudy	C. J. Hering.
Batavia, Dutch Guiana, S.A.	30.03	763.4	.....	.....	77 9	25.5	.....	E	.....	.....	.....	.....	.....	.....	.....	0	0	Clear	Dr. H. Groot.
Medellin, Colombia, S. A.	25.20	640.1	.....	.....	67.5	19.7	78	Calm	.....	.....	0	7.8	0	.....	.....	0	0	Fair	Thomas Herran.
York Factory, B. A.	.....	.....	29.57	751.1	—39 5	—39.7	.....	NW	2	0.9	.....	.....	10n	.....	.....	0.05	1.3	Snowing	J. Fortescue, W. Wood.
Honolulu, Oahu, H. I.	.....	.....	30.01	762.2	68	20.0	94	N	.....	.....	3	.....	.....	.....	.....	0.08	2.0	Cloudy	Daniel Smith.
Makawao, Maui, H. I.	.....	.....	29.85	758.2	60	15.6	87	Calm	.....	.....	0	0	0	.....	.....	0	0	.....	F. L. Clarke.

NOTE.—The originals give the amount of cloudiness by the scale 0 to 4, except York Factory, Makawao, Medellin and Paramaribo. The elevation of the barometer at Bismarck is 1,677 feet, or 511.1 meters; Cheyenne, 6,057.3 ft., or 1,846.2 m.; Clifton, about 2,892 ft. or 881.5 m.; Denver, 5,135 ft., or 1,565.2 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Florence, 1,550 (?) ft. or 472.5 (?) m.; Makawao, 2,205 ft., or 672.1 m.; Morgantown, 1,027.6 ft., or 313.3 m.; Medellin, 4,876 ft., or 1,486.2 m.; Mt. Washington, 6,285 ft., or 1,915.6 m.; North Platte, 2,846 ft., or 867.4 m.; Omaha, 1,054.6 ft., or 321.4 m.; Pike's Peak, 14,150.7 ft., or 4,313.1 m.; Salt Lake City, 4,362.2 ft., or 1,329.6 m.; Santa Fe, 6,862.2 (?) ft., or 2,091.6 (?) m.; Tucson, 2,513 (?) ft., or 772.1 (?) m.; Virginia City, 5,480 (?) ft., or 1,670.3 (?) m.; Yankton, 1,278 ft., or 389.5 m. The following constants are added in correcting the barometric observations for altitude: Cheyenne, 5.04 inches; Denver, 5.22 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fe, 6.54 in.; Tucson, 2.59 in.; Virginia City, 5.48 in. The elevation of Batavia is about 6 feet; the barometric readings need the addition of 0.2 mm. or 0.01 in. for reduction to sea-level.

UNITED STATES NAVAL SERIES.

By authority of the **SECRETARY OF THE NAVY.**

Furnished by the coöperation of the Navy Department, through Commodore Daniel Ammen, U. S. N., Chief of Bureau of Navigation.

STATIONS AND VESSELS.	True course toward—	Hourly rate in knots.	*Barometer as reported.		Temperature of the Air.		Relative Humidity.	Wind.				Clouds.				Rain-fall or melted snow in the past 24 hours.		State of Ocean.	Direction of swell from—	Weather.	Observer.
								Direction.	Velocity		Force.	Amount.		Direction.							
												Up'er	Low'r	Up'er	Low'r						
			Inches.	Millimeters.	Fahrenheit.	Centigrade.	Per cent.	From—	Miles per hour.	Meters per second.	0—10.	0—10.	0—10.	From—	From—	Inches.	Millimeters.				
Naval Academy, Annapolis, Md.			29.65	753.1	34	1.1	90	W			1		10			0	0			Cloudy	
Navy Yard, Norfolk, Va.			30.16†	766.1†	56	13.3		WSW			3		4cs		E					‡D. clouds	
Navy Yard, Pensacola, Fla.			30.30	769.6	59.8	15.4		Calm			0		10							Foggy	
Navy Yard, Portsmouth, N.H.			29.78	756.4	10	—12.2		NW			3		10		SE					Light snow	
Navy Yard, Wash'gton, D.C.			30.08	764.0	38	3.3		WNW			2		9							Overcast	
Adams, Port Royal, S. C.			30.32	770.1	56	13.3	94	SW			1–2									Foggy	
Ajax Port Royal, S. C.			30.02	762.5	54	12.2		Calm			0		10							Dense fog	
Alarm, New York, N. Y.			28 95†	735.3†	27	— 2.8		NW			3		6		SE	Blank	Blank			Hazy	
Canonicus, New Orleans, La.			29.98†	761.5†	64	17.8		S			3									Foggy	
Catskill, Port Royal, S. C.			30.21†	767.3†	52	11.1		S			2							Smooth		Foggy	
Colorado, New York, N. Y.			30.05	763.3	27	— 2.8		NW			5		4		SE	0.006	0.15			Hazy	
Despatch, Washington, D. C.			30.11†	764.8†	36	2.2		NNW			2		10							Overcast	
Dictator, Port Royal, S. C.			30.32	770.1	50	10.0	100	S			2		Fog							Damp	
Essex, Hampton Roads, Va.			30.12	765.0	48	8.8	100	SW			4		1							†D. clouds	
Franklin, New York, N. Y.			30.02	762.5	27.2	— 2.7	98	NW			5		2		W	Blank	Blank	Smooth		‡D. clouds	
Hartford, Hampton Roads, Va.			30.20	767.1	47	8.3		WSW			4		10		NE	0.25	6.3	Moderate	SW	Cloudy	
Huron, Port Royal, S. C.			30.35	770.9	54	12.2	100	S			0–1									Foggy	
Intrepid, New York, N. Y.			30.03	762.7	27	— 2.8		NW			3		4		ESE	Blank	Blank			Hazy	
Manhattan, Port Royal, S. C.			30.22†	767.6†	52	11.1		S			2							Smooth		Dense fog	
Michigan Erie, Pa.			30.25	768.3	6	—14.4	76	SW			3		10		SW					Cloudy	
Minnesota, New York, N. Y.			30.10	764.5	27	— 2.8	100	NW			4		4		NW					Clear	
Monongahela, Baltimore, Md.			30.00	762.0	41	5.6		N			2–3		c, s, n		S					Squally	
New Hampshire, Port Royal, S. C.			30.45	773.4	56	13.3		Calm			0		Fog					Smooth		Foggy	
Ossipee, New Orleans, La.			30.34	770.6	66	18.9		SSE			1									Foggy	
Santee, Annapolis, Md.			29.64†	752.8†	34	1.1	90	W			1		10							Cloudy	
St. Louis, League Island, Pa.			29.90	759.4	35	1.7		NW			3		9		NNE	0.125	3.18			Cloudy	
Swatara, New York, N. Y.			30.10	764.5	26	— 3.3		NNW			2–4		5ks							‡D. clouds	
Tallapoosa, Washington, D. C.			29.90	759.4	33	0.6		NW			2		8		N&W					‡D. clouds	
Wabash, Boston, Mass.			29.56	758 4	13	—10.6		WNW			3		7		S&E					‡D. clouds	
Wyoming, Washington, D. C.			30.50†	774.7†	34	1.1		Calm			0		10		ENE					Overcast	

* It is not known that the barometer is corrected for temperature, instrumental error or elevation. † Aneroid Barometer. ‡ Detached clouds.

UNITED STATES MARINE SERIES

REPORTED TO THE OFFICE OF THE CHIEF SIGNAL OFFICER OF THE ARMY.

NAMES OF VESSELS.	True course toward—	Hourly rate in knots.	Barometer reduced to sea-level.		Temperature of the Air.		Relative Humidity.	Wind.				Clouds.				State of Ocean.	Direction of swell from—	Weather.	Observer.
								Direction.	Velocity.		Force.	Amount.		Direction.					
												Up'er	Low'r	Upper.	Lower.				
			Inches.	Millimeters.	Fahrenheit.	Centigrade.	Per cent.	From—	Miles per hour.	Meters per second.	0—10.	0—10.	0—10.	From—	From—				

PACIFIC MAIL S. S. CO. MARINE SERIES.

Furnished by the coöperation of ————, President; Williams, Blanchard & Co., Agents.

OCCIDENTAL AND ORIENTAL S. S. CO. MARINE SERIES.

Furnished by the coöperation of George H. Bradbury, President; T. H. Goodman, Agent.

NORTH GERMAN LLOYD OF BREMEN MARINE SERIES.

Furnished by the coöperation of A. Schumacher & Co., Agents.

MARINE SERIES. (Miscellaneous.)

Furnished by the coöperation of Captain James Jorgensen.

Schooner Addie Fuller, Staten Island, N. Y.			29.92	760.0	26	— 3.3	75	NNW	14	6.3		0	5ks		NW			Cloudy	Capt. James Jorgenson.

NOTE.—The schooner Addie Fuller gives the amount of cloudiness by the scale 0 to 4.

COLLATED AT THE OFFICE OF THE CHIEF SIGNAL OFFICER OF THE ARMY, WASHINGTON, D. C.

The records which appear in this Bulletin are copied from the regular exchanges of this office, made in each instance in compliance with an especial request and are published for the uses of the coöperating observers. The barometric readings in the first two columns are reduced to freezing and their respective standards; those in the second two also to mean sea-level. The "weather" is generally published as given.

When the distinction between the upper and lower strata of clouds is not reported, the *kinds* or *types*, viz: cirrus, cumulus, stratus, nimbus, scud, fracto, pallio, haze, fog and smoke, as indicated, respectively, by the letters c, k, s, n, d, f, p, hz., fg. and sm'e, are generally published with the amount in the lower cloud column. The distinction between the upper and lower strata is carefully made in the United States Series and a portion of the Canadian Series, and the types are indicated by the above letters or their combinations in the proper column.

Albert J. Myer

Brig. Gen. (Bvt. Assgd.,) Chief Signal Officer, U. S. A.

BULLETIN

OF

INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON JANUARY 14, 1877.

7:35 A. M. WASHINGTON mean time.

6:7 A. M. MEXICO mean time.
7:7 A. M. SAN JOSE mean time.
0:6 P. M. LISBON mean time.
0:28 P. M. MADRID mean time.
0:48 P. M. GREENWICH mean time.
0:53 P. M. PARIS mean time.
1:1 P. M. BRUSSELS mean time.
1:4 P. M. UTRECHT mean time.
1:18 P. M. BERNE mean time.

1:26 P. M. CHRISTIANIA mean time.
1:33 P. M. COPENHAGEN mean time.
1:33 P. M. ROME mean time.
1:37 P. M. BERLIN mean time.
1:49 P. M. VIENNA mean time.
1:55 P. M. STOCKHOLM mean time.
2:18 P. M. ATHENS mean time.
2:39 P. M. CONSTANTINOPLE mean time.
2:44 P. M. ST. PETERSBURG mean time.

ALGERIAN SERIES.

Furnished by the coöperation of General d'Eudeville, Commandant Supérieur du Génie in Algeria.

STATIONS.	Barometer. Corrected for instrumental error and temperature. Inches.	Barometer. Corrected for instrumental error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'r. 0—10.	Clouds. Amount. Low'r. 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Nemours			30.32	770.2	63.9	17.7	50	Calm			0		0			0	0	Clear	Charnot.
Algiers			30.29	769.3	54.7	12.6		NW			2		4			Inap.	Inap.	Fair	Peter.
La Calle			30.06	763.5	55.8	13.2	68	NW			4		8			1.378	35.0	Cloudy	Fleury.
Tunis			30.00	764.2	55.4	13.0		NW			4		7			0.118	3.0	Cloudy	Jacques.
Sfax																			
Sfaïa																			
Tebessa			30.31	769.8	52.0	11 1	50	WNW			1		2			0	0	Clear	Millot.
Gerfville			30.13	765.4	39.2	4.0		W			4		10			0	0	Hidden	Bourgeois.
Laghouat			30.27	768.8	47.7	8.7	16	N			0		1			0	0	Clear	Lemaître.
Biskra			30.22	767.5	51.8	11.0	56	NW			3		2			0	0	Clear	Guyot.
			30.21	767.2	64.0	17.8	58	NW			4		8			0	0	Cloudy	Kuntz.

NOTE.—In the originals the distinction between the amount of upper and lower clouds is apparently not made. The weather is published as given. The rain-fall is measure at 7 a. m., local time.

AUSTRIAN SERIES.

Furnished by the coöperation of Professor Ferdinand Osnaghi, Director of the Imperial and Royal Central Meteorological Institute at Vienna.

STATIONS.	Barometer. Corrected for instrumental error and temperature. Inches.	Barometer. Corrected for instrumental error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'r. 0—10.	Clouds. Amount. Low'r. 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Agram			30.04	763.1	39.4	4.1	80	NE			4		10			0.102	2.6	Raining	Prof. Ivan Stosic.
Cracow, I. R. Observatory			30.21	767.3	32.4	0.2	96	NNE			1		10			0	0		Dr. Wierzbicki.
Eperies			30.13	765.2	35.2	1.8	84	N			3		10			0	0		Julius Mikolitz.
Gratz																			
Hermannstadt	28.90	734.0	30.20	767.0	39.6	3.9	69	SSW			2		10			0	0		Andreas Reissl.
Kremsmünster	28.57	725.6	30.02	762.5	42.1	5.6	78	SE			3		3			0	0		Prof. Reissenberger.
Lemberg	28.74	730.0	30.13	765.4	37.°	2.9	87	WNW			1		10			0	0		Prof. C. Wagner.
Nyiregyhaza			30.21	767.4	27.7	— 2.4	96	SE			2		10			0	0		Dr. T. Stanecki.
Pola																			Fabsanits Daniel.
Szegedin			29.97	761.1	49.3	9.6	56	NNE			3		3ks			0	0		I.R. Hydrographic Office.
Trieste			30.06	763.4	42.4	5.8	78	Calm			0		10			0	0		Karl Stancel.
Vienna			30.04	762.9	48.9	9.4	52	NE			1		8			0	0	Almost clear	Prof. V. Farolfi.
			30.15	765.7	37.°	3.1	78	N			1		10			0	0		I. R. Central Met. Obs'y.

NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 7 p. m., local time. The elevation of Gratz is 343.5 meters, or 1,126.9 feet; Hermannstadt, 407.8 meters, or 1,337.9 feet; Kremsmünster, 383.6 meters, or 1,258.5 feet.

BELGIAN SERIES.

Furnished by the coöperation of J. C. Houzeau, Director of the Royal Observatory at Brussels.

STATIONS.	Barometer. Corrected for instrumental error and temperature. Inches.	Barometer. Corrected for instrumental error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'r. 0—10.	Clouds. Amount. Low'r. 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Arlon			30.07	763.6	36.7	2.6	92	SSE			2		2			0.36	9.2		Royal Observatory.
Ixelles			29.94	760.4	41 7	5.4	85	S			4		10		SW	0.297	7.5	Observed	
Furnes			29.85	758.2	43.5	5.3	92	S			3		10			0.26	6.3		
Maeseyck			29.99	761.7	40.5	4.7	85	S			2		2			0.15	3.7		

NOTE.—In the originals, the weather is occasionally given in general notes.

BRITISH SERIES

Furnished by the coöperation of *Robert H. Scott, Esq.*, Director of the Meteorological Office, London, Alexander Buchan, Secretary of the Scottish Meteorological Society, Edinburgh, and the respective Observers.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Aberdeen			29.54	750.3	41.9	5.5		SSE	27	12.1			9			0.100	2.54	Squally	William Boswell.
Ardrossan																			William McNeil.
Armagh, Observatory			29.42	747.3	43.9	6.6		WSW	7	3.1									S. Call, for Dr. Robinson.
Birr Castle, (Parsonstown)			29.51	749.5	45.1	7.3		W			1		10					Overcast	J. Dreyer.
Bradford																0.03	0.8		J. McLandsborough.
Bridgetown, (Barbados)			30.04	763.0	79	26.1		NE			2		6					*D. clouds	Sergt. J. F. Halanen, A.
Cambridge, Observatory			29.69	754.1	48.0	8.9		S			1		10					Overcast	H. Todd. [H.C
Cardington			29.68	753.9	48.4	9.1		S			2		10					Overcast	John McLaren.
Carlisle																			T. Bell, for J. Cartmell
Chatham, School M. E.			29.73	755.1	47.5	8.6		SW			2		10					Drizzling	Maj. C. N. Martin, R.E
Dartmoor	28.12	714.2	29.63	752.6	46.4	8.0		SW			6		10					Raining	R. E. Power.
Davos Platz, (Switzerland)	24.82	630.4			28.0	— 2.2	42	E			1		0			0	0	Blue sky	Francis Redford, M. A.
Donaghadee			29.37	746.0	43	6.1		W			4		10					Raining	J. Mac Gowan.
Dover			29.76	755.9	46	7.8		SSW			4		8					Raining	J. Costello.
Eccles, (near Manchester)			29.53	750.0	46.9	8.3		SE	7.4	3.3			10					Showery	Thomas Mackereth.
Falmouth, Observatory			29.58	751.3	49.3	9.6		SW			2		10					Foggy	The Staff.
Fort Napier, (Natal)	27.64	702.0	29.88	758.9	80.1	26.7		NW			2		2					*D. clouds	P'vt. G. Salmon, A. H. C
Free Town, (Sierra Leone)			29.95	760.7	86.0	30.0		N			1		2					*D. clouds	
Galway, Queen's College			29.39	746.5	46	7.8		N			4		8					*D. clouds	Prof. A. H. Curtis.
Gibraltar, (Mediterranean)			30.33	770.4	64.2	17.9		SW			3		1					Blue sky	Corpl. C. Aitken, A.H.C.
Glasgow, Observatory			29.86	758.4	37.0	2.8		E			1		10					Raining	Lewis Stuart.
Great Yarmouth			29.77	756.1	43	6.1		S			4		8					Raining	G. T. Watson.
Greenwich, Royal Obs'y			29.73	755.1	48.0	8.9		SSW			1		10					Raining	The Staff, for G. B. Airy.
Guernsey			29.69	754.1	52	11.1		SSW			3		8			Blank	Blank	*D. clouds	Dr. S. E. Hoskins.
Helston			29.64	752.8	52	11.1		SW			4		10n			0.24	6.3	Raining	M. P. Moyle.
Holyhead			29.43	747.5	46	7.8		WNW			5		10					Raining	John Tilston.
Kew, Observatory			29.70	754.4	48.7	9.3		S	14	6.3			10					Raining	The Staff.
Kingstown			29.42	747.3	46	7.8		W			5		10					Drizzling	George Mitchell.
Leicester Museum			29.62	752.3	46.8	8.2		SE			1		10					Drizzling	Wm. J. Harrison, F.G.S.
Malta, (Mediterranean)			29.92	760.0	58.8	14.9		NW			3		4n					*D. clouds	Corp'l. P. Bravis, A.H.C.
Nairn			29.45	748.0	39	3.9		SE			1		10					Raining	W. D. Penny.
Nassau, (Bahamas)			30.12	765.0	74	23.3		NE			1		2					*D. clouds	Surg. Maj. Henry.
Nottingham, Observatory			29.61	752.1	46.7	8.2		SSE			4		10d		SSE	0.18	4.57	Raining	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			29.58	751.3	45.9	7.7		SSE			4		10					Raining	Rev. Stephen Whitty.
Oxford, Radcliffe Obs'y			29.63	752.6	49	9.4		SE			2		10					Misty	J. Lucas.
Plymouth			29.58	751.3	49.0	9.4		SW			3		10					Raining	John Merrifield.
Roche's Point			29.61	752.1	48	8.9		WNW			4		8					Raining	W. Kennedy.
Saint Ann's Head																			John C. Walker.
Saint Helier, (Jersey)			29.72	754.9	52.0	11.1		S			3		10					Overcast	A. P. Amy.
Sandwick Manse, (Orkneys)			29.43	747.5	41.2	5.1		SE	38	17.0			10					Misty	Rev. C. Clouston, LL. D.
Scarborough																			F. Shaw.
Scutari Cemetery, (Turkey)			29.94	760.5	46.8	8.2		NE			2		10					Drizz.ing	Sergt. W. H. Lyne.
Sheffield			29.60	751.8	45.1	7.3		SSW			1		10			0.18	4.62	Overcast	W. F. Cooper.
Silloth Rectory			29.46	748.3	45.3	7.4	87	SW			5		10			0.07	1.78	Overcast	Rev. Francis Redford
Stonyhurst, Observatory			29.52	749.8	44.7	7.1		S			3		8k					Misty	Rev. S. J. Perry.
Stornoway, Lewis C., (Hebr.)			29.24	742.7	45	7.2		SSE			6		10					Raining	John Smith.
Stratfield Turgiss			29.66	753.4	48.7	9.3		S			1		10					Raining	Rev. Charles H. Griffith.
Thurso			29.43	747.5	41	5.0		SSE			6		10					Gloomy	John Trotter.
Truro, Royal Institution			29.60	751.8	52	11.1		NW			6		10					Raining	W. Newcombe.
Valencia, Observatory			29.61	752.1	47.6	8.7		WNW	22	9.8			8					Showery	The Staff.
SUB-SERIES.																			
Calf of Man, (Isle of Man)					46	7.8		SE			7		10			0.15	3.8		Henry Mercer.
Cape Good Hope, Obs'y			30.10	764.5	84.0	28.9	44	SSE	19	8.5		0	1						The Staff, for E. J. Stone.
Hobart Town, (Tasmania)			30.03	762.7	69.0	20.6	94	S			1		0			0	0		Francis Abbott, F.R.A.S.
Leith, Restalrig Park			29.47	748.5	40.0	4.4		SE			2		10n			0.13	3.3	Overcast	Andrew Gibb.
Mauritius, Observatory			30.06	763.5	83.7	28.7	66	SW	7.9	3.5		0	8		WSW	0.02	0.5	Raining	C. Meldrum.
Melbourne, Observatory			30.09	764.3	56.6	13.7	82	SE	5	2.2			0			0	0	Very fine	R. L. J. Ellery.
Monach L't-house, (Hebrides)			29.25	742.9	46	7.8		SW			7		10			0.2	5.1		J. Young clause.
North Unst, (Shetland Is.)			29.64	752.8	38	3.3		SSE			8	10	10		S	Blank	Blank		Robert Burnet.

NOTE.—Generally, the originals do not give the relative humidity, rain-fall, or distinction between upper and lower clouds. The originals give the wind direction to 32 points and weather by the Beaufort notation. The originals give the barometer for Aberdeen, Cardington, Galway, Oxford, St. Helier, Sandwick, Scarborough, Stonyhurst, Leith, Monach and North Unst as read off and the cloudiness for Stornoway by the scale 0 to 4. The wind-force is given by the scale 0 to 12 in the official series; 0 to 6 in the sub-series; except in lbs. per square foot for Greenwich and Hobart Town. The rain-fall is measured at Aberdeen at 10 a. m.; Bradford, 9 a. m.; Hobart Town, 7:30 a. m.; Nottingham, 6 p. m.; Mauritius, 9 a. m., local time. The elevation of Dartmoor is 1,400 feet, or 426.7 meters; Davos Platz, 5,105? feet, or 1,556.0? meters; Fort Napier, 2,200 feet, or 670.6 meters. *Detached cloud?.

By authority of the MINISTER OF FOREIGN AFFAIRS.

COSTA RICA SERIES.

Furnished by the coöperation of Senor Federico Maison, Director of the Central Office of Statistics and Meteorology.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
San José																			

DANISH SERIES.

Furnished by the coöperation of Captain N. Hoffmeyer, Director of the Royal Danish Meteorological Institute at Copenhagen.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Copenhagen			30.14	765.6	30.4	— 0.9	90	SE			4		10					Snowing	
Faröe			30.05	763.3	31.5	— 0.3	89	SE			4		10						
Godthaab, (Greenland)			28.92	734.5	8.2	-13.2	72	SSE			4		5						
Stykkisholm, (Iceland)			28.88	728.4	37.9	3.3	95	W			7		10					Raining	
Thorshavn, (Faröe)			29.31	744.5	42.8	6.0	90	S			8		10					Raining	
Vesterÿig			30.10	764.5	27.3	— 2.6	83	E			4		10						

NOTE.—The originals give the wind-force by the scale 0 to 6; occasionally, weather by Vienna symbols; no distinction between the amount of upper and lower clouds.

FRENCH SERIES.

Furnished by the cooperation of His Excellency, U. J. Le Verrier, Director of the Paris Observatory, and the respective Observers.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Alençon	.....	.....	29.92	759.9	48.2	9	97	SW	.....	.....	2	.....	10	.....	.....	0.102	2.6	Covered	Normal School.
Amiens	.....	.....	29.87	758.7	42.8	6.0	91	SW	.....	.....	3	.....	5	.....	SW	0	0	Cloudy.....	Normal School.
Avignon	.....	.....	30.10	764.6	48.9	9.4	56	N	.....	.....	1	.....	0	.....	.....	0	0	Clear	Normal School.
Bar-sur-Seine	.....	.....	30.05	763.2	42.8	6.0	77	SSW	.....	.....	1	.....	10n	.....	.....	0	0	Covered	C. Saillard.
Beaumette, (near Angers)	.....	.....	29.89	759.1	52.0	11.1	97	SW	16.1	7.2	.....	.....	.....	.....	SW	0.146	3.7	.....	Beaumette Observ'tory.
Beauvais	.....	.....	29.92	759.9	43.5	6.4	89	S	.....	.....	3	.....	10	.....	.....	0.012	0.30	Covered	Normal School.
Besançon	.....	.....	30.15	765.8	41.4	5.2	69	SSW	.....	.....	3	.....	2	.....	W	0	0	Slightly cl'dy	Normal School.
Bourg en Bresse	.....	.....	30.23	767.8	35.1	1.7	96	SE	.....	.....	2	.....	.....	.....	.....	0	0	Misty.	Normal School.
Bourges	.....	.....	29.97	761.1	47.1	8.4	94	SE	.....	.....	2	.....	2	.....	SE	0.24	6.	Slightly cl'dy	Normal School.
Brest	.....	.....	29.62	752.4	49.5	9.7	89	WSW	.....	.....	5	.....	10	.....	WSW	0.138	3.50	Raining.....	Naval Observatory.
Carcassonne	.....	.....	30.11	764.8	52.7	11.5	73	W	.....	.....	1	.....	5	.....	E	0.04	1.	Cloudy.....	Normal School.
Caen	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Chartres	.....	.....	29.91	759.7	44.2	6.8	97	S	.....	.....	3	.....	8	.....	SE	0.012	0.3	.....	Normal School.
Châlons-sur-Marne	.....	.....	30.03	762.8	39.2	4.0	87	S	.....	.....	3	.....	10n	.....	.....	0	0	Covered	Normal School.
Clermont	.....	.....	29.98	761.6	48.7	9.3	61	S	.....	.....	1	.....	5	.....	SW	0	0	Cloudy.....	Puy de Dome Obs'y.
Commercy	.....	.....	30.07	763.6	37.6	3.1	86	SE	.....	.....	1	2c	.....	SE	.....	0	0	Slightly cl'dy	Normal School.
Commune de Gréasque*	.....	.....	30.10	764.5	45.9	7.7	59	W	.....	.....	2	.....	0	.....	.....	0	0	.....	M. Kina.
Grenoble	.....	.....	30.16	766.1	39.0	3.9	66	ENE	.....	.....	4	.....	0	.....	.....	0	0	Clear	Normal School.
La Roche-sur-Yon	.....	.....	30.01	762.3	53.6	12.0	93	W	.....	.....	2	.....	10	.....	.....	0.071	1.8	Covered	Normal School.
Le Mans	.....	.....	29.89	759.2	45.7	7.6	97	SW	.....	.....	4	.....	10	.....	.....	0.08	2.	Covered	Normal School.
Lons-Le-Saulnier	.....	.....	30.11	764.8	37.2	2.9	60	NE	.....	.....	1	.....	0	.....	.....	0	0	Clear	Normal School.
Lorient	.....	.....	29.78	756.5	54.3	12.4	81	SSW	.....	.....	6	.....	10	.....	.....	0.322	8.2	Raining.....	Naval Observatory.
Mâcon	.....	.....	30.17	763.6	36.1	2.3	89	Calm	.....	.....	0	.....	.....	.....	.....	0	0	Foggy	Normal School.
Metz	.....	.....	30.13	765.3	36.7	2.6	77	NE	.....	.....	2	.....	5	.....	.....	0	0	.....	M. Schuster.
Mirecourt	.....	.....	30.15	765.9	37.0	2.8	83	W	.....	.....	2	.....	2	.....	NE	0	0	Slightly cl'dy	Normal School.
Nismes	.....	.....	30.12	765.1	51.4	10.8	61	N	.....	.....	1	.....	0	.....	.....	0	0	Clear	Normal School.
Orleans	.....	.....	29.97	761.1	43.5	6.4	91	SSW	.....	.....	1	.....	10	.....	SSW	0.020	0.5	Covered	Normal School.
Paris, Observatory	.....	.....	29.94	760.5	42.1	5.6	98	SSE	.....	.....	2	.....	10	.....	.....	0.009	0.24	Rain & fog...	National Observatory.
Parthenay	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Privas	.....	.....	30.14	765.5	47.1	8.4	.....	NNW	.....	.....	2	.....	2	.....	NNW	0	0	Slightly cl'dy	Normal School.
Rochefort, Observatory	.....	.....	29.96	761.0	53.2	11.8	86	SW	.....	.....	3	.....	10	.....	NE	0.236	6.0	Covered	Naval Observatory.
Rouen	.....	.....	29.89	759.3	45.0	7.2	89	W	.....	.....	2	.....	10	.....	SW	0.043	1.1	Covered	Normal School.
Saint Lo	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Tarbes	29.03	737.3	30.13	765.4	46.0	7.8	90	W	.....	.....	3	.....	5	.....	SE	0	0	Cloudy.....	Normal School.
Villefranche	.....	.....	30.17	766.4	38.5	3.6	91	SE	.....	.....	2	.....	10	.....	.....	0	0	Covered	Normal School.
Sub-Series.																			
Fort de France, Martinique	.....	.....	29.89	759.3	73.4	23	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	L'Abbé Marchésl.
Marseilles	.....	.....	30.07	763.6	50.2	10.1	58	NW	.....	.....	2	.....	2	.....	.....	0	0	Partly cl'dy.	Marseilles Observatory.
Mont-Louis	24.87	631.8	30.19	766.8	38.5	3.6	59	SW	18.0	8.33	.....	.....	5	.....	WNW	0	0	.....	—. Falgière.
Montsouris, Paris	.....	.....	29.93	760.2	42.1	5.6	95	S	.....	.....	3	.....	10	.....	.....	0.016	0.4	Rain & fog...	Montsouris Observatory
Perpignan	.....	.....	30.11	764.8	52.3	11.3	59	SE	5.6	2.50	.....	.....	4	.....	NW	0	0	.....	Dr. Fines.
Pic du Midi, (Summit,) H. P.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. Baylac.
Pic du Midi, (Plantade,) H. P.	22.48	571.1	.....	.....	34.5	1.4	.....	SW	.....	.....	4	.....	8	.....	.....	0.697	17.7	Snowy.....	General de Nansouty.
Saint Maur, (near Paris)	.....	.....	29.94	760.5	42.1	5.6	100	SSE	.....	.....	1	.....	10	.....	.....	.....	.....	Light rain....	E. Renou.
Toulouse	.....	.....	30.14	765.6	48.9	9.4	89	SE	.....	.....	1	.....	8	.....	.....	0.047	1.2	.....	Toulouse Observatory.
Tours	.....	.....	29.93	760.1	48.7	9.3	92	SSW	.....	.....	2	.....	10	.....	SSW	0.146	3.7	.....	C. Marquet.
Versailles, (near Paris)	.....	.....	29.91	759.8	43.5	6.4	100	SW	.....	.....	3	.....	10	.....	.....	0.041	1.04	Rainy.....	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai)	.....	.....	30.78	781.9	24.4	— 4.2	64	NNW	5.2	2.33	.....	.....	0	.....	.....	0	0	.....	Marc Dechevrens, S. J.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—Generally, the originals give the wind-force by the scale 0 to 7; no distinction between upper and lower clouds, and, in the official series, the amount by the scale 0 to 4; the rain-fall as measured at 7, 8 or 9 a. m., local time; at Clermont, 9 a. m. of the following day; the weather in general terms as published. The elevation of Clermont is 388 meters, or 1,272.9 feet; Commune de Gréasque, 322 meters, or 1,056.4 feet; Tarbes, 308 meters, or 1,010 feet; Mont-Louis, 1,580.40 meters, or 5,204.8 feet; Pic du Midi, (Summit,) 2,877 meters, or 9,439.1 feet; Pic du Midi, (Plantade,) 2,366 meters, or 7,762.6 feet. In correcting the Mont-Louis barometric observations for altitude, the constant 135. millimeters has been added. *Bouches-du-Rhône

GERMAN SERIES.

Furnished by the cooperation of Professor Dr. G. Neumayer, Director of the German Naval Observatory, Hamburg.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Bamberg	.....	.....	30.11	764.7	36.5	2.5	84	W	.....	.....	3	.....	6	W	.....	0	0	.....	Prof. T. Hoh
Berlin	.....	.....	30.18	766.5	36.1	2.3	82	SE	.....	.....	2	.....	10	.....	.....	0.008	0.2	.....	Prof. Arndt.
Breslau	.....	.....	30.19	766.8	32.2	0.1	89	ESE	.....	.....	1	.....	9	.....	.....	0	0	.....	Royal University Obs'y.
Carlsruhe	.....	.....	30.10	764.6	39.6	4.2	81	SW	.....	.....	1	.....	10	.....	.....	0	0	.....	A. Senz.
Cassel	.....	.....	30.10	764.5	37.8	3.2	82	SE	.....	.....	2	.....	10	S	.....	0	0	.....	Dr. H. Möhl.
Crefeld	.....	.....	30.00	762.1	40.6	4.8	78	SE	.....	.....	3	.....	7	.....	.....	0.04	1.	.....	Director Lose.
Emden	.....	.....	30.11	764.9	37.6	3.1	96	SE	.....	.....	2	.....	10	.....	.....	0	0	.....	Prof. Prestel.
Frankfort on the Main	.....	.....	30.14	765.5	35.6	2.0	87	SSW	.....	.....	1	.....	9	.....	.....	0	0	Foggy	Physical Society.
Friedrichshafen	28.67	728.3	30.17	766.3	36.3	2.4	85	NW	.....	.....	1	.....	0	.....	.....	0.268	6.8	.....	M. Wilhelm.
Hamburg	.....	.....	30.09	764.3	33.1	0.6	96	SE	.....	.....	3	.....	10	.....	.....	0.024	0.6	Foggy	Captain F. Hegemann.
Kiel	.....	.....	30.18	766.5	32.5	0.3	93	ENE	.....	.....	2	.....	10	.....	.....	0	0	.....	Prof. G. Karsten.
Königsberg, (Prussia)	.....	.....	30.31	769.8	26.6	— 3.0	89	SE	.....	.....	2	.....	10	.....	.....	0	0	.....	Prof. E. Luther.
Kosslin	.....	.....	30.23	767.8	32.0	0 0	.....	Calm	.....	.....	0	.....	10	.....	.....	0	0	.....	H. Müller.
Leipsic	.....	.....	30.15	765.8	37.6	3.1	93	SSE	.....	.....	1	.....	8	.....	.....	0.012	0.3	.....	Prof. Bruhns.
Memel	.....	.....	30.33	770.3	22.3	— 5.4	87	SE	.....	.....	4	.....	10ks	.....	.....	0.205	5.2	.....	Reinbrecht & Skalweit.
Münster	.....	.....	29.99	761.8	41.5	5.3	78	NW	.....	.....	1	.....	3	.....	.....	0.039	1.0	.....	Prof. E. Heis.
Neufahrwasser	.....	.....	30.26	768.5	30.9	— 0.6	92	S	.....	.....	1	.....	10	.....	.....	0	0	Smoke-haze.	A Lothe.
Posen	.....	.....	30.25	768.3	32.5	0.3	96	NNE	.....	.....	2	.....	10	.....	.....	0	0	.....	Dr. Magener.
Strassburg, (in Alsace)	.....	.....	30.13	765.3	40.3	4.6	76	Calm	.....	.....	0	.....	10	W	.....	0	0	.....	Dr. Schur.
Stuttgart	.....	.....	30.11	764.8	42.3	5 7	56	W	.....	.....	1	.....	2	.....	.....	0	0	.....	Prof. Schoder.
Thorn	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Dr. Hasenbalg.
Treves, (Trier)	.....	.....	30.02	762.5	38.3	3.5	79	W	.....	.....	3	.....	7	.....	.....	0	0	Foggy	Prof. Flesch.
Weissenburg, (Bavaria)	28.67	725.7	30.13	765.4	37.9	3.3	67	SSE	.....	.....	4	.....	3	.....	.....	0	0	.....	Dr. von Bebber.
Wustrow, Naval School	.....	.....	30.20	767.1	31.8	— 0.1	84	SE	.....	.....	2	.....	10	.....	.....	0	0	.....	E. F. Schütz.
German Naval Series.																			
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—The elevation of Friedrichshafen is 413.4 meters, or 1,356 3 feet; Weissenburg, 431 meters, or 1,414.0 ft. In the originals the distinction between the amount of upper and lower clouds is not made. It is not always certain that the remarks in the weather column refer to the moment of observation.

GREEK SERIES.

Furnished by the coöperation of Professor Dr. J. F. Julius Schmidt, Director of the Royal Observatory at Athens.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Athens			29.74	755.4	60.1	15.6		SE			Strong							Light rain...	

Note.—The originals give the barometer corrected, but not reduced to sea-level; occasionally the kind of clouds; the weather as published. They omit the humidity, wind-force, amount of cloudiness and rain-fall.

ITALIAN SERIES.

Furnished by the coöperation of His Excellency the Minister of Agriculture, Industry and Commerce, and the respective Observers.

Udine			30.00	762.0	48.0	8.9	67	W	0.7	0.3			3			0	0		Prof. Giovanni Godig.
Stelvio	22.01	559.0			17.2	— 8.2		SE			1		0			0	0		Signora Ernesta Manfredi.
Valdobbia	22.02	559.2			17.6	— 8.0	60	W			2		1	NW		0	0		Ab. Dom. Mongini.
Padua			30.00	762.0	44.1	6.7	82	ESE	3.1	1.4			5	ENE		0	0		Prof. Dott. Lorenzoni.
Vicenza			29.99	761.8	51.1	10.6	61	SW	4.5	1.9			1	W		0	0		Conte Alm. Da Schio.
Verona			30.02	762.6	49.1	9.5	63	W			2		0			0	0		Dott. B. Bertoncelli.
Bergamo	28.66	728.0	30.02	762.5	45.3	7.4	52	S			2		0			0	0		Prof Trionfini Carlo.
Domodossola			30.04	763.1	44.4	6.9	46	Calm			0		1			0	0		Prof. Giuseppe Cuzzi.
Milan			30.06	763.5	48.2	9.0	63	WNW			1		0			0	0		Ab. Gio. Capelli.
Pavia			30.06	763.4	42.4	5.8	62	W			4		0			0	0		Prof. Gio. Cantoni.
Moncalieri			30.08	764.1	42.8	6.0	60	NNE	2.6	1.1			0			0	0		Prof. P. F. Denza.
Mondovi	28.10	713.8	30.08	764.1	41.9	5.5	33	NW			2		0			0	0		Prof. D. C. Bruno.
Porto Maurizio			30.08	763.9	53.6	12.0	54	SW			2		1			0	0		Prof. L. Vassallo.
Genoa			30.03	762.8	54.0	12.2	32	N	3.8	1.7			0			0	0		Prof. G. M. Garibaldi.
Piacenza			30.06	763.4	43.8	6.4	69	WNW	6.9	3.1			0			0	0		Dott. G. Manzi.
Parma			30.05	763.3	45.5	7.5	68	WNW			4		0			0	0		Prof. P. Pigorini.
Florence			30.02	762.5	50.9	10.5	57	NE			2		4	N		0	0		Cav. F. Meucci.
Leghorn			30.02	762.5	52.3	11.3		E	6.4	2.8			1			0	0		Prof. P. Monte.
Siena	28.77	730.8	30.01	762.3	47.7	8.7	57	NW	3.1	1.4			3	NE		0	0		Prof. L. Toscani.
Urbino	28.40	721.4	30.01	762.2	42.3	5.7	81	NNE			4		8			0	0		Prof. P. Serpieri.
Pesaro			30.02	762.4	46.9	8.3	79	WNW	39.1	17.5			10	N		0.059	1.5	Raining	Prof. Luigi Guidi.
Ancona			29.99	761.8	48.9	9.4	60	NW			2		5			0.12	3.1	Raining	Prof. F. De— Bosis.
Grosseto			30.02	762.4	53.1	11.7	52	NNE			4		3	SE		0	0		Avv. P. Ponticelli.
Rome			29.92	760.0	54.0	12.2	50	N	13.7	6.1			0			0	0		Profs. P. Secchi & L. Respighi.
Naples, O. U.			29.92	760.0	55.9	13.3	42	NNE			6		5	N		0.033	0.8	Light rain	Prof. L. Palmieri.
Lecce			29.80	757.0	52.9	11.6	72	N	21.7	9.7			8			0.012	0.3	Light rain	Prof. C. De—Giorgi.
Cosenza			29.88	759.0	55.0	12.8	76	NW	1.3	0.6			8			0.028	0.7	Light rain	Prof. F. D. Conti.
Cagliari																			Prof. A. Pacinotti.
Ilposto, (Sicily)			29.79	756.6	59.4	15.2	56	SSW			2		5	S		0	0		Prof. F. Cafiero.
Palermo			29.87	758.6	54.0	12.2	62	WNW	9.8	4.4			10			0.091	2.3	Raining	Prof. G. Cacciatore.
Caltanissetta	27.91	709.0	29.91	759.6	49.1	9.5	76	WNW			4		7			0	0		Prof. A. Pagani.
Siracusa			29.81	757.1	60.1	15.6	53	SSW			1		9	SW		0	0		Prof. V. Giuliano.
Sub-Series.																			
Naples, S. R.			29.93	760.3	52.2	11.2	50	NE	2.5	1.1			4	NE		0.039	1.0		Prof. F. Brioschi

Note.—The originals give the wind-force by the scale 0 to 4, or the velocity in kilometers per hour; generally, no distinction between upper and lower clouds; occasionally the weather by the Vienna symbols. The elevation of Stelvio is 2,543.0 meters, or 8,342.9 feet; Valdobbia, 2,548.0 meters or 8,359.3 feet; Bergamo, 379.6 meters, or 1,245.3 feet; Mondovi, 556 meters, or 1,824.2 feet; Siena, 348.5 meters, or 1,143.3 feet; Urbino, 451 meters, or 1,479.7 feet; Caltanissetta, 570.3 meters, or 1,871.0 feet.

Furnished by the coöperation of the Imperial University of Tokei, Japan.

JAPANESE SERIES.

Tokei			29.96	761.0	29	— 1.7		Calm	0	0			0			0	0		Prof. P. V. Veeder.

Note.—The originals give the amount of cloudiness by the scale 0 to 4 without distinguishing between upper and lower clouds. The rain-fall is measured at 7 a. m., local time.

By authority of the Secretary of Public Works.

MEXICAN SERIES.

Furnished by the coöperation of Señor Mariano Barcena, Director of the Central Meteorological Observatory in the City of Mexico.

Mexico																			Mariano Barcena. Vicente Reyes. Miguel Perez. (Engineers in Charge.)

Note.—The elevation of Mexico is 2,290 meters, or 7,512.9 feet. The rain-fall is measured at 6 a. m., local time.

NETHERLANDS' SERIES.

Furnished by the coöperation of Professor Buys Ballot, Director of the Royal Meteorological Institute of the Netherlands at Utrecht.

Flushing			29.91	759.6	41.0	5.0		S			4					0	0		
Groningen			29.93	760.2	36.0	2.2		ESE			3					0.004	0.1		
Helder			29.89	759.2	39.6	4.2		SSE			3					0.114	2.9		
Utrecht			29.91	759.8	39.7	4.3	80				4		8			0.008	0.2	Very cloudy	

Note.—The originals give the wind-pressure in kilograms per square meter; for Utrecht, they give the weather as published, from which the amount of cloudiness is taken by the scale 0 to 4, without distinguishing between upper and lower clouds. It is assumed that the barometer readings have been reduced to sea-level.

NORWEGIAN SERIES.

Furnished by the coöperation of Professor H. Mohn, Director of the Royal Norwegian Meteorological Institute at Christiania.

Bergen			30.04	763.0	23.7	— 4.6	86	SSE	2.0	0.9			0			0	0		
Brönö			30.13	765.4	24.4	— 4.2	32	NE	8.9	4			0						
Christiania			30.32	770.0	10.4	—12.0	78	E	3.1	1.4			10			0.059	1.5	Light snow	
Tromsö			30.07	763.6	35.2	1.8	72	SW	4.5	2			2			0	0		

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols. The cloudiness and weather at Bergen refer to 2h., p. m., local time, instead of 1h., 4 min.

PORTUGUESE SERIES.

Furnished by the coöperation of J. C. de Brito Capello, Director of the Meteorological Observatory of the Infante Don Luiz at Lisbon.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Angra, (Azores)	.....	.....	30.47	773.9	55.0	12.8	83	E	.....	.....	.....	.....	5	.....	.....	0.087	2.2	.....	Dr. J. A. Sampaio.
Campo Major	.....	.....	30.39	772.0	50.9	10.5	77	WNW	8.1	3.6	.....	.....	9	WNW	.....	0	0	.....	Dr. A. M. R. dos Santos.
Funchal, (Madeira)	.....	.....	30.41	772.3	62.6	17.0	61	ENE	3.1	1.4	.....	.....	6	.....	.....	0	0	.....	Capt. D. A. da Cunha.
Lisbon	.....	.....	30.42	772.6	55.6	13.1	72	W	8.7	3.9	.....	.....	10	WNW	.....	0	0	.....	The Observatory.
Ponta Delgada, (Azores)	.....	.....	30.49	774.5	60.8	16.0	79	SSE	5.6	2.5	.....	.....	3	N	.....	0	0	.....	

Note.—The originals give the wind-velocity in kilometers per hour; occasionally, the weather by the Vienna symbols; the amount of cloudiness without distinguishing between upper and lower clouds; the barometer corrected but not reduced to sea-level. The rain-fall at Lisbon is measured at noon, instead of 9 h. 6 m., p. m.

RUSSIAN SERIES.

Furnished by the cooperation of Professor H. Wild, Director of the Imperial Central Physical Observatory of Russia, at St. Petersburg.

Warsaw	.....	.....	30.28	769.1	28.6	— 1.9	86	ESE	9	4	.....	.....	10	.....	.....	.....	.....	.....	Astronomical Obs.
Wilna	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Astronomical Obs.
Dorpat	.....	.....	30.60	777.1	10.9	—11.7	87	ESE	9	4	.....	.....	3	.....	.....	.....	.....	.....	Physical Cabinet.
St. Petersburg	.....	.....	30.75	781.0	1.6	—16.9	93	SE	9	4	.....	.....	6	.....	.....	.....	.....	Light fog.....	Central Physical Obs.
Kuopio	.....	.....	30.67	779.0	—14.3	—25.7	.....	Calm	0	0	.....	.....	0	.....	.....	.....	.....	.....	Ch. Forsten.
Kieff	.....	.....	30.44	773.2	16.7	— 8.5	85	E	7	3	.....	.....	10	.....	.....	.....	.....	.....	Physical Cabinet.
Nikolaiev	.....	.....	30.30	769.5	26.8	— 2.9	81	NE	22	10	.....	.....	10	.....	.....	.....	.....	.....	Kurdakof.
Kertch	.....	.....	30.14	765.0	34.7	1.5	96	ENE	10	7	.....	.....	10	.....	.....	.....	.....	.....	Lagorio.
Moscow	.....	.....	30.82	782.9	7.5	—13.6	79	NW	7	3	.....	.....	0	.....	.....	.....	.....	.....	Meteorological Obs.
Lugan	.....	.....	30.44	773.1	18.1	— 7.7	57	E	27	12	.....	.....	3	.....	.....	.....	.....	.....	Meteorological Obs.
Archangel	.....	.....	30.57	776.4	— 0.8	—18.2	94	SW	7	3	.....	.....	0	.....	.....	.....	.....	.....	Ogorodnikof.
Tiflis	28.85	732.9	30.32	770.1	48.2	6.3	55	E	13	6	.....	.....	7	.....	.....	.....	.....	.....	Physical Observatory.
Astrakhan	.....	.....	30.54	775.8	20.7	— 6.3	66	NE	7	3	.....	.....	4	.....	.....	.....	.....	.....	Sebastianof.
Kasan	.....	.....	30.65	778.6	12.0	—11.1	100	Calm	0	0	.....	.....	10	.....	.....	.....	.....	Light snow..	Physical Cabinet.
Orenburg	.....	.....	30.35	770.9	—11.0	—23.9	56	E	13	6	.....	.....	0	.....	.....	.....	.....	.....	Tchernischei.
Ekaterinburg	28.34	745.2	30.36	771.0	4.8	—15.1	88	WSW	4	2	.....	.....	0	.....	.....	.....	.....	.....	Meteorological Obs.
Pulkuss	.....	.....	30.13	765.4	35.6	2.0	64	N	9	4	.....	.....	8	.....	.....	.....	.....	.....	
Kasaly	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Bobrof.
Tashkend	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Michelson.
Barnaul	.....	.....	30.10	766.7	18.1	—10.5	93	SW	4	2	.....	.....	10	.....	.....	.....	.....	Snowing.....	Meteorological Obs.
Yeniseisk	.....	.....	29.73	755.2	11.5	—11.4	90	S	2	1	.....	.....	10	.....	.....	.....	.....	Snowing.....	Marks.
Irkutsk	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Usolzef.
Peking, (China)	.....	.....	30.73	780.6	18.1	— 7.7	66	SW	11	5	.....	.....	0	.....	.....	.....	.....	.....	Physical Observatory.
Nertchinsk	28.10	713.7	30.50	774.8	—20.2	—29.0	91	Calm	0	0	.....	.....	0	.....	.....	.....	.....	.....	Meteorological Obs.
Vladivostock	.....	.....	30.23	767.9	3.7	—15.7	76	Calm	0	0	.....	.....	0	.....	.....	.....	.....	.....	
Nikolaievsk, on the Amoor	.....	.....	.....	.....	— 2.6	—19.2	.....	W	7	3	.....	.....	2	.....	.....	.....	.....	.....	

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols; they omit the rain-fall. The elevation of Tiflis is 409 meters, or 1,341.8 feet; Ekaterinburg, 306.4? m., or 1,005.2? ft.; Tashkend, 494.2? m., or 1,621.3? ft.; Irkutsk, 389 m., or 1,276 ft.; Nertchinsk, 592.0? m., or 1,942.2? ft.

SPANISH SERIES.

Furnished by the coöperation of Antonio Aguilar, Director of the Royal Observatory at Madrid, and of Don Cecilio Pujazon, Captain, R. N., Director of the Naval Observatory at San Fernando.

Madrid	.....	.....	30.36	771.1	40.6	4.8	89	SE	1.5	0.67	.....	.....	10	.....	.....	0	0	Covered.....	Royal Observatory.
San Fernando	.....	.....	30.41	772.3	56.3	13.5	72	NNE	7.6	3.4	.....	4	5	N	N	0	0	.....	Naval Observatory.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

Note.—The originals give the weather in general terms, as published; rain-fall for San Fernando from preceding to following midnight; wind-velocity for Madrid in kilometers per hour.

SWEDISH SERIES.

Furnished by the coöperation of Professor R. Rubenson, Director of the Royal Swedish Meteorological Institute, at Stockholm, and of Dr. H. H. Hildebrandsson, Chief of the Meteorological Division of the Upsala Observatory.

Haparanda	.....	.....	30.59	776.9	—10.5	—23.6	82	SE	.....	.....	2	.....	0	.....	.....	0	0	.....	
Umea	.....	.....	30.51	775.0	— 6.2	—21.2	100	Calm	.....	.....	0	.....	0	.....	.....	0	0	.....	
Hernosand	.....	.....	29.30?	744.1?	— 5.8	—20.7	93	N	.....	.....	2	.....	10	.....	.....	0	0	Foggy	
Stockholm	.....	.....	30.32	770.2	19.4	— 7.0	83	N	.....	.....	2	.....	10	.....	.....	0	0	.....	
Wisby	.....	.....	30.26	768.6	28.8	— 1.8	96	SE	.....	.....	4	.....	10	.....	.....	0.016	0.4	Snowing.....	
Upsala	.....	.....	30.33	770.4	13.6	—10.2	97	NNW	5.8	2.6	.....	.....	10	.....	.....	0.068	1.73	Snowing.....	Dr. Hildebrandsson.

Note.—The originals give the wind-force by the scale 0 to 6, and Upsala also velocity in meters per second; occasionally, the weather by the Vienna symbols, or in general terms; no distinction between the amount of upper and lower clouds. The rain-fall is measured at 8 a. m., local time.

SWISS SERIES.

Furnished by the coöperation of Professor R. Wolf, Director of the Observatory at Zurich, and of Professor E. Plantamour, Director of the Observatory at Geneva.

STATIONS.	Barometer. Corrected for instrumental error and temperature. Inches.	Barometer. Corrected for instrumental error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'r. 0—10.	Clouds. Amount. Low'r. 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Geneva	28.68	728.4	30.14	765.5	42.4	5.8	60	SW			1		1			0	0	Clear	The Observatory.
Zurich	28.47	723.0	30.15	765.9	39.0	3.9	62	W			1		0			0	0	Clear	The Observatory.

Note.—For Geneva the corresponding departures from the normal values are: Barometer, +0.7 mm; Thermometer, +4.4 cent.; Relative Humidity, —19 per cent.

Note.—The rain-fall is measured at Zurich at 7 a. m. on the following day. The originals give the barometer corrected but not reduced to sea-level; the wind-force by the scale 0 to 4 for Zurich; the amount of cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The elevation of Geneva is 408 meters, or 1,339 feet, and that of Zurich 470 meters, or 1,542 feet.

TURKISH SERIES.

Furnished by the coöperation of A. Coumbary, Effendi, Director of the Central Observatory at Constantinople, and of Professor C. V. A. Van Dyck, Superintendent of the Lee Observatory at Beirut.

Constantinople			30.00	762.0	46.4	8.0	94	NE	13	6.0			10		NE	0.354	9.0		
Fao, (Persian Gulf)																			
Salonica			29.81	757.2	59.5	15.3		E			4		8			Blank	Blank		
Valona			29.75	755.6	51.6	10.9		W			1		10						
Varna			29.80	757 0	42.8	6.0		N			2		10						
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y			30.19	766.7	67.1	19.5	64	WNW			2		9cs			0.02	0.5	Overcast	Prof. C. V. A. Van Dyck

Note.—The originals give the wind-force by the scale 0 to 7, (except Beirut, by the scale 0 to 12, and Constantinople velocity in meters per second;) the weather in general terms as published; no distinction between upper and lower clouds, and, except Constantinople and Beirut, the amount by the scale 0 to 4. It is assumed that the barometer is reduced to sea-level.

CANADIAN SERIES.

Furnished by the coöperation of Professor G. T. Kingston, Director of the Magnetic Observatory at Toronto, and Superintendent of the Meteorological Office of the Dominion of Canada, and the respective Observers. Those marked with a star (*) are also telegraphed daily to the office of the Chief Signal Officer, U. S. Army.

Bathurst, N. B																			Hon. J. Ferguson.
Brockville, Ontario			29.86	758.4	10	—12.2		NW	1	0.4			10s		NW	0.35	8.9	Light snow	W. R. Bigg.
*Chatham, N. B			29.33	745.0	7	—13.9	88	SW	8	3.6		8ck	2ks	SW	SW	0.01	0.3	Fair	G. A. Blair.
Charlottetown, P. E. Island			29.35	745.5	19	— 7.2	94	S	10	4.5			10n			0.02	0.5	Light snow	H. J. Cundall, C. E.
Cornwall, Ontario			29.80	756.9	8.9	—12.8	82	NW			3		8s			0	0	Clearing	James Smith, M. A.
Dalhousie, N. B								W			1					0.03	0.8	Overcast	H. A. Johnson.
Esquimault, B. C																			W. H. Bevis.
Fredericton, N. B			29.46	748.3	9.9	—12.3	83	NW	2	0.9		0	0			Inap.	Inap.	Fine	Prof. Harrison.
*Fort Garry, Manitoba			30.33	770.4	—43	—41.7	100	Calm	0	0		0	0			0	0	Clear	James Stewart.
Goderich, Ontario			30.08	764.0	15.6	— 9.1	86	SW			2		10n			0	0	Dull	H. J. Strang, M. A.
Granton, Ontario	28.81	731.8	30.00	762.0	14.4	— 9.8		W			1		10n			Inap.	Inap.	Cloudy	James Grant.
*Halifax, N. S			29.48	748.8	27	— 2.8	94	SW	22	9.8			8n			0.400	10.16	Cloudy	F. Allison, M. A.
Hamilton, Ontario			30.02	762.5	16.7	— 8.5	88	W			1	10ck	0			0	0	Cloudy	G. Dickson.
Heart's Content, N. F			29.66	753.4	14	—10.0	100	SE			2		10			0.06	1.5	Snowing	E. Weedon.
*Kingston, Ontario			29.91	759.7	17	— 8.3	83	W	6	2.7		0	5k		W	0.16	4.1	Fair	S. Woods, M. A
*Montreal, Quebec			29.71	754.6	10	—12.2	79	NW	19	8.5		0	2k		W	0	0	Clear	C. H. McLeod, C. E.
*Ottawa, Ontario			29.73	755.1	2	—16.7	86	NW	6	2.7		0	0			0	0	Clear	J. B. Haney.
*Parry Sound, Ontario			30.02	762.5	— 1	—18.3	92	N	12	5.4		0	0			0.14	3.6	Clear	Rev. R. Mosley.
Port Dover, Ontario			30.03	762.7	17	— 8.3	83	SW	7	3.1		10k	0	W		0	0	Fair	H. Morgan.
Port Hastings, N. S																			Peter Grant.
Port Stanley, Ontario			30.04	763.0	16	— 8.9	89	W	10	4.5			10ks		W	0.05	1.3	Cloudy	M. Payne.
*Quebec, Quebec			29.61	752.1	3	—16.1	73	NW	6	2.7		0	0			0.20	5.1	Clear	Capt. Ashe, R. N.
*Rockliffe, Ontario			30.00	762.0	— 8	—22.2	89	W	15	6.7		0	0			0.01	0.3	Clear	
St. John, N. B			29.53	750.0	19	— 7.2	69	W	8	3.6		0	0			Inap.	Inap.	Clear	G. Murdoch, C. E.
*Saugeen, Ontario			30.00	762.0	12	—11.1	80	NW	12	5.4			10n			0.03	0.8	Cloudy	K. Stewart.
Stayner, Ontario																			R. J. Cole.
Stratford, Ontario	28.63	727.2	30.01	762.2	14.1	— 9.9	93	W	12	5.4			10n			0.10	2.5	Cloudy	C. J. MacGregor, M. A
*Sydney, C. B			29.51	749.5	19	— 7.2	91	S	11	4.9		8ck	5ks	W	SW	0.17	4.3	Fair	T. C. Hill.
*Toronto, Ontario			29.98	761.5	18	— 7.8	95	NW	14	6.3			10n		NW	0.03	0.8	Cloudy	Magnetic Observatory.
Woodstock, Ontario			29.93	760.2	14.5	— 9.7	91	W	15	6.7		5cs	0			0	0	Fair	J. Montgomery.
Sub-Series.																			
St. Johns, Newfoundland			29.74	755.4	16.0	— 8.9		S				10k	10s			0.14	3.6	Fair	John Delany.

Note.—The originals for Brockville, Charlottetown, Port Dover, Port Stanley, Stayner, St. Johns, N. F. and those telegraphed, give the amount of cloudiness by the scale 0 to 4. The elevation of Granton is 1,015 feet, or 309.4 m.; Stratford, 1,182 feet, or 360.3 m.

UNITED STATES SERIES.

Furnished by the coöperation of Bvt. Brig. Gen. Albert J. Myer, Chief Signal Officer, U. S. Army.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Albany, N. Y.	.....	.....	29.84	757.9	21	— 6.1	85	S	3	1.3	.....	.....	10s	.....	.....	0	0	Cloudy	
Alpena, Mich.	.....	.....	30.09	764.3	0	—17.8	69	NW	8	3.6	.....	0	2s	.....	NW	0	0	Fair	
Atlantic City, N. J.	.....	.....	29.96	761.0	29	— 1.7	89	W	8	3.6	.....	10c	0	W	.....	0	0	Cloudy	
Augusta, Ga.	.....	.....	30.08	764.0	60	15.6	88	Calm	0	0	.....	.....	10s	.....	.....	0.03	0.8	Cloudy	
Baltimore, Md.	.....	.....	30.00	762.0	32	0.0	79	NW	5	2.2	.....	2c	5s	.....	.....	0	0	Cloudy	
Barnegat, N. J.	.....	.....	29.94	760.5	24	— 4.4	94	SW	9	4.0	.....	8cs	0	W	.....	0	0	Fair	
Bismarck, Dakota	27.95	709.9	29.76	755.9	— 6	—21.1	80	E	12	5.4	.....	.....	10s	.....	.....	0.11	2.8	Threatening	
Boston, Mass.	.....	.....	29.77	756.1	19	— 7.2	84	W	9	4.0	.....	2cs	1s	W	.....	0	0	Fair	
Breckenridge, Minn.	.....	.....	30.10	764.5	—11	—23.9	76	N	4	1.8	.....	.....	10s	.....	.....	0	0	Cloudy	
Buffalo, N. Y.	.....	.....	29.96	761.0	17	— 8.3	83	W	20	8.9	.....	.....	10s	.....	W	0.02	0.5	Cloudy	
Burlington, Vt.	.....	.....	29.71	754.6	20	— 6.7	70	W	12	5.4	.....	0	2s	.....	W	0	0	Fair	
Cairo, Ill.	.....	.....	30.12	765.0	27	— 2.8	88	E	7	3.1	.....	5ck	5s	W	W	0	0	Cloudy	
Cape Hatteras, N. C.	.....	.....	29.91	759.7	47	8.3	92	NE	6	2.7	.....	.....	10s	.....	.....	0.14	3.6	Cloudy	
Cape Henry, Va.	.....	.....	30.01	762.2	36	2.2	90	Calm	0	0	.....	.....	10s	.....	.....	0	0	Cloudy	
Cape Lookout, N. C.	.....	.....	29.98	761.5	61	16.6	100	SW	10	4.5	.....	.....	10s	.....	SW	0.04	1.0	Cloudy	
Cape May, N. J.	.....	.....	29.99	761.7	31	— 0.6	79	W	14	6.3	.....	.....	10s	.....	W	0.01	0.3	Cloudy	
Charleston, S. C.	.....	.....	30.06	763.5	59	15.0	87	S	6	2.7	.....	5c	2s	W	W	0	0	Fair	
Cheyenne, Wyoming	23.70	602.0	29.64	752.8	29	— 1.7	67	W	10	4.5	.....	0	0	.....	.....	0	0	Clear	
Chicago, Ill.	.....	.....	30.05	763.3	10	—12.2	68	SW	2	0.9	.....	0	0	.....	.....	0	0	Clear	
Cincinnati, Ohio	.....	.....	30.09	764.3	26	— 3.3	76	W	4	1.8	.....	5ck	0	NW	.....	Inap.	Inap.	Fair	
Cleveland, Ohio	.....	.....	30.12	765.0	14	—10.0	82	SW	8	3.6	.....	.....	10s	.....	.....	0	0	Cloudy	
Corsicana, Tex.	.....	.....	30.04	763.0	33	0.6	89	SE	5	2.2	.....	.....	10s	.....	.....	0.01	0.3	Cloudy	
Davenport, Iowa	.....	.....	30.10	764.5	5	—15.0	87	Calm	0	0	.....	4k	6s	W	.....	0	0	Cloudy	
Denison, Tex.	.....	.....	30.01	762.2	35	1.7	70	S	9	4.0	.....	.....	10s	.....	.....	0	0	Cloudy	
Denver, Col.	24.49	622.0	29.71	754.6	16	— 8.9	83	S	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Detroit, Mich.	.....	.....	30.06	763.5	16	— 8.9	83	W	3	1.3	.....	10cs	0	W	.....	Inap.	Inap.	Cloudy	
Dodge City, Kan.	27.18	690.4	29.56	750.8	22	— 5.6	85	N	2	0.9	.....	.....	10s	.....	.....	0	0	Cloudy	
Dubuque, Iowa	.....	.....	30.06	763.5	2	—16.7	72	Calm	0	0	.....	.....	10s	.....	.....	0	0	Cloudy	
Duluth, Minn.	.....	.....	30.19	766.8	—15	—26.1	72	N	12	5.4	.....	5c	0	W	.....	0	0	Fair	
Eastport, Me.	.....	.....	29.51	749.5	15	— 9.4	73	SW	9	4.0	.....	2cs	2s	SW	SW	0.13	3.3	Fair	
Erie, Pa.	.....	.....	30.04	763.0	18	— 7.8	92	SW	20	8.9	.....	.....	10n	.....	.....	Inap.	Inap.	Light snow.	
Escanaba, Mich.	.....	.....	30.14	765.5	— 5	—20.6	63	NW	2	0.9	.....	0	0	.....	.....	0	0	Clear	
Fort Gibson, Indian Ter.	.....	.....	29.98	761.5	31	— 0.6	68	SE	2	0.9	.....	.....	10s	.....	.....	0	0	Cloudy	
Ft. St. Michael, Alaska	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Fort Sill, Indian Ter.	28.62	726.9	29.78	756.4	28	— 2.2	59	S	14	6.3	.....	10cs	0	W	.....	0	0	Cloudy	
Fort Sully, Dakota	28.98	736.1	29.84	757.9	—10	—23.3	77	SE	5	2.2	.....	0	0	.....	.....	0	0	Clear	
Florence, Arizona	28.31	719.1	29.83	757.7	49	9.4	.....	SW	.....	.....	.....	.....	10s	.....	SW	0.14	3.6	Cloudy	
Galveston, Tex.	.....	.....	30.11	764.8	45	7.2	100	N	4	1.8	.....	.....	10s	.....	.....	0	0	Cloudy	
Grand Haven, Mich.	.....	.....	30.01	762.2	24	— 4.4	86	N	7	3.1	.....	0	9s	.....	NW	0.02	0.5	Cloudy	
Indianapolis, Ind.	.....	.....	30.12	765.0	19	— 7.2	84	Calm	0	0	.....	.....	10s,am	.....	.....	0	0	Cloudy	
Indianola, Tex.	.....	.....	30.11	764.8	39	3.9	81	N	6	2.7	.....	.....	10s	.....	.....	0.09	2.3	Cloudy	
Jacksonville, Fla.	.....	.....	30.15	765.8	64	17.8	94	SW	4	1.8	.....	.....	10s	.....	.....	0	0	Cloudy	
Keokuk, Iowa	.....	.....	30.08	764.0	12	—11.1	80	SW	4	1.8	.....	.....	10s	.....	SW	0	0	Cloudy	
Key West, Fla.	.....	.....	30.16	766.1	71	21.7	90	NE	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Kittyhawk, N. C.	.....	.....	30.01	762.2	42	5.6	100	N	3	1.3	.....	.....	10s	.....	W	0.17	4.3	Cloudy	
Knoxville, Tenn.	.....	.....	30.14	765.5	34	1.1	79	Calm	0	0	.....	.....	10s	.....	.....	0.01	0.3	Cloudy	
La Crosse, Wis.	.....	.....	30.02	762.5	12	—11.1	61	S	4	1.8	.....	Haze	Haze	.....	.....	0	0	Hazy	
Leavenworth, Kan.	.....	.....	29.99	761.7	20	— 6.7	85	S	1	0.4	.....	.....	10s	.....	.....	0	0	Cloudy	
Louisville, Ky.	.....	.....	30.18	766.6	27	— 2.8	88	S	4	1.8	.....	.....	10s	.....	.....	0	0	Cloudy	
Lynchburg, Va.	.....	.....	29.99	761.7	38	3.3	71	W	2	0.9	.....	10c	0	W	.....	0	0	Cloudy	
Malone, N. Y.	.....	.....	29.74	755.4	11	—11.7	79	NW	15	6.7	.....	.....	10s	.....	NW	0.11	2.8	Cloudy	
Marquette, Mich.	.....	.....	30.10	764.5	— 5	—20.6	63	W	12	5.4	.....	0	0	.....	.....	0	0	Clear	
Memphis, Tenn.	.....	.....	30.14	765.5	35	1.7	100	Calm	0	0	.....	.....	10n	.....	S	0.07	1.8	Light rain	
Milwaukee, Wis.	.....	.....	30.07	763.8	11	—11.7	79	W	5	2.2	.....	0	0	.....	.....	0	0	Clear	
Mobile, Ala.	.....	.....	30.12	765.0	58	14.4	100	S	4	1.8	.....	.....	Fog	.....	.....	0.01	0.3	Dense fog	
Montgomery, Ala.	.....	.....	30.13	765.3	63.5	11.9	93	S	2	0.9	.....	.....	Fog	.....	.....	0.62	15.7	Foggy	
Morgantown, W. Va.	29.03	737.3	30.15	765.8	25	— 3.9	75	W	10	4.5	.....	.....	10s	.....	W	0	0	Cloudy	
Mt. Washington, N. H.	22.83	579.9	29.19	741.4	— 8	—22.2	100	NW	90	40.2	.....	.....	Fog	.....	.....	0	0	Foggy	
Nashville, Tenn.	.....	.....	30.15	765.8	30	— 1.1	85	Calm	0	0	.....	.....	10s	.....	.....	0	0	Cloudy	
New Haven, Conn.	.....	.....	29.90	759.4	25	— 3.9	40	NW	5	2.2	.....	5c	5s	NW	W	0	0	Cloudy	
New London, Conn.	.....	.....	29.85	758.2	24	— 4.4	74	W	10	4.5	.....	0	1s	.....	W	0	0	Clear	
New Orleans, La.	.....	.....	30.10	764.5	62	16.7	97	Calm	0	0	.....	.....	Fog	.....	.....	0.04	1.0	Foggy	
Newport, R. I.	.....	.....	29.82	757.4	25	— 3.9	77	W	20	8.9	.....	0	0	.....	.....	0	0	Clear	
New York, N. Y.	.....	.....	29.92	760.0	21	— 6.1	71	NW	16	7.2	.....	0	2s	.....	.....	0	0	Clear	
Norfolk, Va.	.....	.....	30.00	762.0	41	5.0	73	E	3	1.3	.....	.....	10s	.....	.....	0	0	Cloudy	
North Platte, Neb.	26.85	682.0	29.65	753.1	2	—16.7	72	NW	8	3.6	.....	0	6s	.....	.....	0	0	Fair	
Omaha, Neb.	28.70	731.3	29.95	760.7	10	—12.2	79	S	1	0.4	.....	0	2s	.....	.....	0	0	Fair	
Oswego, N. Y.	.....	.....	29.88	758.9	22	— 5.6	100	W	24	10.7	.....	.....	10n	.....	.....	Inap.	Inap.	Heavy snow	
Pembina, Dakota	.....	.....	30.26	768.6	—47	—43.9	.....	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Philadelphia, Pa.	.....	.....	29.96	761.0	24	— 4.4	74	W	9	4.0	.....	3c,cs	Haze	W	.....	0	0	Fair	
Pike's Peak, Col.	17.40	443.5	29.67	753.6	5	—15.0	75	SW	40	17.9	.....	0	2s	.....	.....	0	0	Fair	
Pittsburgh, Pa.	.....	.....	30.13	765.3	18	— 7.8	84	W	6	2.7	.....	0	2s	.....	W	0	0	Clear	
Port Huron, Mich.	.....	.....	30.04	763.0	13	—10.6	81	SW	9	4.0	.....	5cs	2s	NW	.....	0	0	Fair	
Portland, Me.	.....	.....	29.63	752.6	14	—10.0	81	W	12	5.4	.....	0	0	.....	.....	0	0	Clear	
Portland, Oregon	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Punta Rassa, Fla.	.....	.....	30.17	766.3	64.5	18.1	97	E	5	2.2	.....	0	0	.....	.....	0	0	Clear	
Rochester, N. Y.	.....	.....	29.90	759.4	19	— 7.2	77	W	20	8.9	.....	Haze	5s	W	W	0	0	Fair	
Salt Lake City, Utah	25.36	644.1	29.69	754.1	22	— 5.6	74	SE	2	0.9	.....	0	3s	.....	.....	Inap.	Inap.	Fair	
Sandy Hook, N. J.	.....	.....	29.90	759.4	23	— 5.0	85	W	20	8.9	.....	5c	0	SW	.....	0	0	Fair	
San Diego, Cal.	.....	.....	30.05	763.3	44	6.7	75	Calm	0	0	.....	0	0	.....	.....	0.24	6.1	Clear	
San Francisco, Cal.	.....	.....	30.00	762.0	44	6.7	75	S	4	1.8	.....	0	5s	.....	S	0	0	Fair	
Santa Fé, N. M.	23 05	585.5	29.59	751.6	33	0.6	69	E	4	1.8	.....	.....	10s	.....	.....	0	0	Cloudy	
Savannah, Ga.	.....	.....	30.10	764.5	64	17.8	94	SW	11	4.9	.....	.....	10s	.....	W	0	0	Cloudy	
Shreveport, La.	.....	.....	30.14	765.5	38	3.3	100	Calm	0	0	.....	.....	10s	.....	.....	0.14	3.6	Cloudy	
Smithville, N. C.	.....	.....	30.00	762.0	53	11.7	93	SW	6	2.7	.....	.....	10s,fg	.....	SW	0	0	Cloudy	
Springfield, Mass.	.....	.....	29.83	757.7	12	—11.1	69	Calm	0	0	.....	10c,k	0	NW	.....	0	0	Fair	
St. Louis, Mo.	.....	.....	30.08	764.0	25	— 3.9	75	SW	4	1.8	.....	.....	10s	.....	.....	0	0	Cloudy	
St. Marks, Fla.	.....	.....	30.16	766.1	59	15.0	100	Calm	0	0	.....	.....	Fog	.....	.....	0	0	Foggy	
St. Paul, Minn.	.....	.....	30.04	763.0	8	—13.3	78	N	6	2.7	.....	0	5s	.....	.....	0.01	0.3	Fair	
St. Paul's Island, Alaska	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Thatcher's Island, Mass.	.....	.....	29.73	755.1	21	— 6.1	43	W	20	8.9	.....	3c,cs	0	W	.....	Inap.	Inap.	Fair	
Toledo, Ohio	.....	.....	30.08	764.0	20	— 6.7	85	SW	8	3.6	.....	5cs	Haze	SW	.....	0	0	Fair	
Tucson, Arizona	27.42	696.5	29.97	761.2	42	5.6	.....	W	.....	.....	.....	.....	10n	.....	W	0.06	1.5	Light rain	
Tybee Island, Ga.	.....	.....	30.08	764.0	56	13.3	100	SW	7	3.1	.....	5c	Fog	SW	.....	0	0	Fair	
Vicksburg, Miss.	.....	.....	30.15	765.8	48	8.1	100	N	2	0.9	.....	.....	Fog	.....	.....	0.10	2.5	Misting	
Virginia City, M. T.	23.96	608.6	29.44	747.8	21	— 6.1	85	Calm	0	0	.....	.....	10ks	.....	NW	Inap	Inap.	Cloudy	
Washington, D. C.	.....	.....	30.02	762.5	25	— 3.9	88	W	2	0.9	.....	.....	10s	.....	.....	0	0	Cloudy	
Wilmington, N. C.	.....	.....	29.98	761.5	58	14.4	93	SW	6	2.7	.....	.....	10s	.....	W	0	0	Cloudy	

UNITED STATES SERIES.—CONTINUED.

STATIONS.	BAROMETER. Corrected for instrum'tal error and temperature. Inches.	BAROMETER. Corrected for instrum'tal error and temperature. Millimeters.	BAROMETER. Reduced to sea-level. Inches.	BAROMETER. Reduced to sea-level. Millimeters.	TEMPERATURE OF THE AIR. Fahrenheit.	TEMPERATURE OF THE AIR. Centigrade.	RELATIVE HUMIDITY. Per cent.	WIND. Direction. From—	WIND. Velocity. Miles per hour.	WIND. Velocity. Meters per second.	WIND. Force. 0—10.	CLOUDS. Amount. Upper. 0—10.	CLOUDS. Amount. Low'r. 0—10.	CLOUDS. Direction. Upper. From—	CLOUDS. Direction. Lower From—	RAIN-FALL OR MELTED SNOW IN THE PAST 24 HOURS. Inches.	RAIN-FALL OR MELTED SNOW IN THE PAST 24 HOURS. Millimeters.	WEATHER.	OBSERVER.
Wood's Holl, Mass.	.....	.....	29.81	757.2	27	— 2.8	66	NW	20	8.9	.....	0	0	.....	.....	0	0	Clear	
Yankton, Dakota	28.61	726.7	30.06	763.5	— 5	—20.6	63	N	1	0.4	.....	0	0	.....	.....	0	0	Clear	
Yuma, Arizona	.....	.....	30.00	762.0	45	7.2	.....	W	.....	.....	.....	0	0	.....	.....	.....	.....	Clear	
SUB-SERIES.																			
Kingston, Jamaica, W. I.	.....	.....	30.22	767.6	73	22.8	76	Calm	0	0	.....	2c	2s	.....	.....	0	0	.....	James Gall.
Navassa, W. I.	.....	.....	.....	.....	79	26.1	.....	E	.....	.....	1	.....	.....	.....	.....	0	0	Clear	F. M. Everett.
Clifton, Ja., W. I.	27.29	693.2	30.10	764.5	66	18.9	83	E	1.0	0.4	.....	2	0	E	.....	0	0	Fine	C. Partridge.
Paramaribo, D. Guiana, S.A.	.....	.....	30.01	762.2	81	27.2	74	E	.....	.....	1	5k	6ks	E	.....	0	0	½ cloudy	C. J. Hering.
Batavia, Dutch Guiana, S.A.	30.08	763.9	.....	.....	77.0	25.0	.....	E	.....	.....	.....	.....	.....	.....	.....	0	0	Clear	Dr. H. Groot.
Medellin, Colombia, S. A.	25.20	640.1	.....	.....	69 0	20.6	71	NW	.....	.....	1	2ck	3ks	.....	.....	0	0	Fair	Thomas Herran.
York Factory, B. A.	.....	.....	29.85	758.2	—38.5	—39.2	.....	NW	16	7.2	.....	3cs	0	NW	.....	0	0	Fair	J. Fortescue, W. Wood.
Honolulu, Oahu, H. I.	.....	.....	30.00	762.0	71	21.7	95	NE	.....	.....	2	.....	.....	.....	.....	0.35	8.9	Clear	Daniel Smith.
Makawao, Maui, H. I.	.....	.....	29.88	758.9	62	16.7	77	Calm	.....	.....	0	0	4k	.....	.....	0	0	.....	F. L. Clarke.

NOTE.—The originals give the amount of cloudiness by the scale 0 to 4, except York Factory, Makawao, Medellin and Paramaribo. The elevation of the barometer at Bismarck is 1,677 feet, or 511.1 meters; Cheyenne, 6,057.3 ft., or 1,846.2 m.; Clifton, about 2,892 ft. or 881.5 m.; Denver, 5,135 ft., or 1,565.2 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Florence, 1,550 (?) ft., or 472.5 (?) m.; Makawao, 2,205 ft., or 672.1 m.; Morgantown, 1,027.9 ft., or 313.3 m.; Medellin, 4,876 ft., or 1,486.2 m.; Mt. Washington, 6,285 ft., or 1,915.6 m.; North Platte, 2,846 ft. or 867.4 m.; Omaha, 1,054.6 ft., or 321.4 m.; Pike's Peak, 14,160.7 ft., or 4,313.1 m.; Salt Lake City, 4,362.2 ft., or 1,329.6 m.; Santa Fé, 6,802.2 (?) ft., or 2,091.6 (?) m.; Tucson, 2,513 (?) ft., or 772.1 (?) m.; Virginia City, 5,480 (?) ft., or 1,670.3 (?) m.; Yankton, 1,278 ft., or 389.5 m. The following constants are added in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Denver, 5.22 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fé, 6.54 in.; Tucson, 2.53 in.; Virginia City, 5.48 in. The elevation of Batavia is about 6 feet; the barometric readings need the addition of 0.2 mm. or 0.01 in. for reduction to sea-level.

UNITED STATES NAVAL SERIES.

By authority of the **SECRETARY OF THE NAVY.**

Furnished by the coöperation of the Navy Department, through Commodore Daniel Ammen, U. S. N., Chief of Bureau of Navigation.

STATIONS AND VESSELS.	True course toward—	Hourly rate in knots.	*Barometer as reported.		Temperature of the Air.		Relative Humidity.	Wind.				Clouds.				Rain-fall or melted snow in the past 24 hours.		State of Ocean.	Direction of swell from—	Weather.	Observer.
								Direction.	Velocity		Force.	Amount.		Direction.							
												Up'er	Low'r	Up'er	Low'r						
			Inches.	Millimeters.	Fahrenheit.	Centigrade.	Per cent.	From—	Miles per hour.	Meters per second.	0—10.	0—10.	0—10.	From—	From—	Inches.	Millimeters.				
Naval Academy, Annapolis, Md.			29.61	752.1	29	— 1.7	82	NW			1		10			0	0			Cloudy	
Navy Yard, Norfolk, Va.			30.11†	764.8†	39	3.9		WNW			1		6ks		S					Overcast	
Navy Yard, Pensacola, Fla.			30.19	766.8	59.5	15.3		SSW			1		10							Foggy	
Navy Yard, Portsmouth, N.H.			29.66	753.4	13	—10.6		WSW			4				E					Fine	
Navy Yard, Wash'gton, D. C.			30.12	765.0	27	— 2.8		Calm			0		7							Hazy	
Adams, Port Royal, S. C.			30.12	765.0	56	13.3	94	SSW			1–2									Foggy	
Ajax, Port Royal, S. C.			30.12	765.0	54	12.2		Calm			0		10							Dense fog	
Alarm, New York, N. Y.			8.86	733.0†	22	— 5.6		W			2		2			0	0			Clear	
Canonicus, New Orleans, La.			29.86†	758.4†	60	15.6		Calm			0									Foggy	
Catskill, Port Royal, S. C.			30.06†	763.5	52	11.1		S			1							Smooth		Foggy	
Colorado, New York, N. Y.			29.98	761.5	24	— 4.4		WNW			1		1		S&E	0	0			‡D. clouds	
Despatch, Washington, D. C.			30.08†	7 4.0	26	— 3.3		Calm			0		9							Cloudy	
Dictator, Port Royal, S. C.			30.12	765.0	51	10.6	100	S			0–1		Fog							Damp	
Essex, Hampton Roads, Va.			30.10	764.5	41	5.0	91	N			2		10							Overcast	
Franklin, New York, N. Y.			29.98	761.5	23.5	— 4.7	100	W			3		4					Smooth		‡D. clouds	
Hartford, Hampton Roads, Va.			30.17	766.3	37	2.8		NNE			1		10		ENE	0	0			Overcast	
Huron, Port Royal, S. C.			30.18	766.6	59	15.0	91	SW			1									Foggy	
Intrepid, New York, N. Y.			29.95	760.7	23	— 5.0		W			1		2							Clear	
Manhattan, Port Royal, S. C.			30.15†	765.8†	52	11.1		S			1							Smooth		Dense fog	
Michigan, Erie, Pa.			30.04	763.0	18	— 7.8	92	SW			3		10							Light snow	
Minnesota, New York, N. Y.			30.01	762.2	22	— 5.6	100	W			2		4							Clear	
Monongahela, Baltimore, Md.			29.97	761.2	33	0.6		WSW			1		..cks		E					Hazy	
New Hampshire, Port Royal, S. C.			30.30	769.6	57	13.9		SW			1		Fog					Smooth		Foggy	
Ossipee, New Orleans, La.			30.21	767.3	59	15.0		Calm			0									Foggy	
Santee, Annapolis, Md.			29.60†	751.8†	31	— 0.6	100	NW			1		10							Cloudy	
St. Louis, League Island, Pa.			29.8	757.4	24	— 4.4		SSW			3		8		SE	0	0			Cloudy	
Swatara, New York, N. Y.			30.00	762.0	21	— 6.1		SW			2		2s							‡D. clouds	
Tallapoosa, Washington, D. C.			29.91	759.7	26	— 3.3		WSW			1		9		N&W					‡D. clouds	
Wabash, Boston, Mass.			29.81	757.2	21	— 6.1		WSW			3		6		S&E					‡D. clouds	
Wyoming, Washington, D. C.			30.46	773.7†	26	— 3.3		Calm			0		10							Overcast	

* It is not known that the barometer is corrected for temperature, instrumental error or elevation. † Aneroid Barometer. ‡ Detached clouds.

UNITED STATES MARINE SERIES

REPORTED TO THE OFFICE OF THE CHIEF SIGNAL OFFICER OF THE ARMY.

NAMES OF VESSELS.	TRUE COURSE TOWARD—	HOURLY RATE IN KNOTS.	BAROMETER REDUCED TO SEA-LEVEL.		TEMPERATURE OF THE AIR.		RELATIVE HUMIDITY.	WIND.			CLOUDS.				STATE OF OCEAN.	DIRECTION OF SWELL FROM—	WEATHER.	OBSERVER.
								Direction.	Velocity.		Force.	Amount.		Direction.					
												Upper	Lower	Upper.	Lower.				
			Inches.	Millimeters.	Fahrenheit.	Centigrade.	Per cent.	From—	Miles per hour.	Meters per second.	0—10.	0—10.	0—10.	From—	From—				

PACIFIC MAIL S. S. CO. MARINE SERIES.

Furnished by the coöperation of ————, President; Williams, Blanchard & Co., Agents.

OCCIDENTAL AND ORIENTAL S. S. CO. MARINE SERIES.

Furnished by the coöperation of George H. Bradbury, President; T. H. Goodman, Agent.

NORTH GERMAN LLOYD OF BREMEN MARINE SERIES.

Furnished by the coöperation of A. Schumacher & Co., Agents.

Steamer Nürnberg, N. 50°, 8′, W. 17°, 20′	W		29.78	756.4	45.5	7.5		NW			8		..lc		NW	Long swell.		Squally	Capt. A. Jaeger.

MARINE SERIES. (Miscellaneous.)

Furnished by the coöperation of Captain James Jorgensen.

Schooner Addie Fuller, N. 39°, 25′, W. 74°, 00′	SW	5	29.98	760.2	39°	3.9	91	WSW	13	5.8			10s			Short sea		Overcast	Capt. James Jorgensen.

NOTE.—The schooner Addie Fuller gives the amount of cloudiness by the scale 0 to 4.

COLLATED AT THE OFFICE OF THE CHIEF SIGNAL OFFICER OF THE ARMY, WASHINGTON, D. C.

The records which appear in this Bulletin are copied from the regular exchanges of this office, made in each instance in compliance with an especial request and are published for the uses of the coöperating observers. The barometric readings in the first two columns are reduced to freezing and their respective standards; those in the second two also to mean sea-level. The "weather" is generally published as given.

When the distinction between the upper and lower strata of clouds is not reported, the *kinds or types*, viz: cirrus, cumulus, stratus, nimbus, scud, fracto, pallio, haze, fog and smoke, as indicated, respectively, by the letters c, R, s, n, d, f, p, hz, fg, and smk, are generally published with the amount in the lower cloud column. The distinction between the upper and lower strata is carefully made in the United States Series and a portion of the Canadian Series, and the types are indicated by the above letters or their combinations in the proper column.

Albert J. Myer

Brig. Gen. (Bvt. Asst.) Chief Signal Officer, U. S. A.

BULLETIN

OF

INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON JANUARY 15, 1877.

7:35 A. M. WASHINGTON mean time.

6:7 A. M. MEXICO mean time.
7:7 A. M. SAN JOSE mean time.
0:6 P. M. LISBON mean time.
0:28 P. M. MADRID mean time.
0:43 P. M. GREENWICH mean time.
0:58 P. M. PARIS mean time.
1:1 P. M. BRUSSELS mean time.
1:4 P. M. UTRECHT mean time.
1:13 P. M. BERNE mean time.

1:26 P. M. CHRISTIANIA mean time.
1:33 P. M. COPENHAGEN mean time.
1:33 P. M. ROME mean time.
1:37 P. M. BERLIN mean time.
1:49 P. M. VIENNA mean time.
1:55 P. M. STOCKHOLM mean time.
2:18 P. M. ATHENS mean time.
2:39 P. M. CONSTANTINOPLE mean time.
2:44 P. M. ST. PETERSBURG mean time.

ALGERIAN SERIES.

Furnished by the coöperation of General d'Eudeville, Commandant Supérieur du Génie in Algeria.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Nemours	.....	.....	30.32	770.2	61.9	16.6	71	NNW	.....	.....	4	.....	7	.....	.....	0	0	Cloudy	Charnot.
Algiers	.....	.....	30.28	769.0	59.0	15.0	.....	WNW	.....	.....	2	.....	8	.....	.....	0	0	Cloudy	Peter.
La Calle	.....	.....	30.02	762.4	56.1	13 4	82	NW	.....	.....	3	.....	8	.....	.....	1.654	42.0	Cloudy	Fleury.
Tunis	.....	.....	30.02	762.5	57.2	14.0	.....	NW	.....	.....	4	.....	7	.....	.....	0.197	5.0	Cloudy	Jacques.
Sfax	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Saida	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Tebessa	.....	.....	30.29	769.4	50.0	10.0	66	WNW	.....	.....	2	.....	6	.....	.....	0	0	Fair	Millot.
Geriville	.....	.....	30.08	764.0	42.8	6.0	.....	W	.....	.....	4	.....	7	.....	.....	0.276	7 0	Cloudy	Bourgeois.
Laghouat	.....	.....	30.28	769.0	44.2	6.8	25	N	.....	.....	1	.....	1	.....	.....	0	0	Clear	Lemaillot.
Biskra	.....	.....	30.20	767.0	54.5	12.5	54	W	.....	.....	3	.....	2	.....	.....	0	0	Clear	Guyot.
.....	.....	.....	30.17	766.4	63.9	17.7	47	NW	.....	.....	2	.....	8	.....	.....	0	0	Cloudy	Kuntz.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—In the originals the distinction between the amount of upper and lower clouds is apparently not made. The weather is published as given. The rain-fall is measure at 7 a. m., local time.

AUSTRIAN SERIES.

Furnished by the cooperation of Professor Ferdinand Osnaghi, Director of the Imperial and Royal Central Meteorological Institute at Vienna.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Agram	.....	.....	29.98	761.5	41.5	5.3	72	NE	.....	.....	2	.....	10	.....	.....	0.071	1.8	.....	Prof. Ivan Stozir.
Cracow, I. R. Observatory	.....	.....	30.10	764.4	32 2	0.1	94	NNE	.....	.....	1	.....	10	.....	.....	0	0	.....	Dr. Wierzbiski.
Eperies	.....	.....	29.98	761.6	41.2	5.1	77	Calm	.....	.....	0	.....	3cs	.....	.....	0	0	.....	Julius Mikolik.
Gratz	28.81	731.8	30.11	764.8	30.6	4.2	79	S	.....	.....	2	.....	10	.....	.....	0.417	10.6	.....	Andreas Rospini.
Hermannstadt	28.49	724,0	29.97	761.3	34.0	1.1	85	ESE	.....	.....	1	.....	10	.....	.....	0.106	2.70	Snowy	Prof. Reissenberger.
Kremsmünster	28.63	727.2	30.04	762 9	32.0	0.0	89	Calm	.....	.....	0	.....	10	.....	.....	0.394	10.0	.....	Prof. C. Wagner.
Lemberg	.....	.....	30.12	765.0	27.0	— 2.8	90	E	.....	.....	2	.....	8	.....	.....	0	0	.....	Dr. T. Stanecki.
Nyiregyhaza	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Habzsuda Daniel.
Pola	.....	.....	29.88	758.9	48.9	9.4	57	N	.....	.....	1	.....	9ks	.....	.....	0	0	.....	I.R.Hydrographic Office.
Szegedin	.....	.....	29.98	761.4	41.0	5.0	81	Calm	.....	.....	0	.....	10	.....	.....	0.134	3.40	.....	Karl Stancel.
Trieste	.....	.....	29.92	760.0	46.4	8.0	59	ENE	.....	.....	5	.....	7	.....	.....	Inap.	Inap.	.....	Prof. V. Farolfi.
Vienna	.....	.....	30.02	762.4	36.7	2.6	89	Calm	.....	.....	0	.....	9	.....	.....	0	0	.....	I. R. Central Met. Obs'y.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
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NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 7 p. m., local time. The elevation of Gratz is 343.5 meters, or 1,126.9 feet: Hermannstadt, 407.8 meters, or 1,337.9 feet; Kremsmünster, 383.6 meters, or 1,258.5 feet.

BELGIAN SERIES.

Furnished by the cooperation of J. C. Houzeau, Director of the Royal Observatory at Brussels.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Arlon	.....	.....	30.07	763.7	41.4	5.2	78	NW	.....	.....	2	.....	8	.....	.....	0.031	0.8	.....	Royal Observatory.
Brussels	.....	.....	30.00	762.1	43.0	6.6	79	WNW	.....	.....	4	.....	9	.....	WNW	0.020	0.50	Raining	
Furnes	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Maseyck	.....	.....	29.93	760.2	43.7	6.5	94	WNW	.....	.....	3	.....	10	.....	.....	0.004	0.1	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—In the originals, the weather is occasionally given in general notes.

BRITISH SERIES

Furnished by the coöperation of Robert H. Scott, Esq., Director of the Meteorological Office, London, Alexander Buchan, Secretary of the Scottish Meteorological Society, Edinburgh, and the respective Observers.

STATIONS.	Barometer. Corrected for instru-m'tal error and temperature. Inches.	Millimeters.	Barometer. Reduced to sea-level. Inches.	Millimeters.	Temperature of the Air. Fahrenheit.	Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Velocity. Miles per hour.	Meters per second.	Force. 0—10.	Clouds. Amount. Up'er 0—10.	Low'r 0—10.	Direction. Upper. From—	Lower From—	Rain-fall or melted snow in the past 24 hours. Inches.	Millimeters.	Weather.	Observer.
Aberdeen			29.84	757.9	39.0	3.9		SW	10	4.5			3			0.190	4.83	Blue sky	William Boswell.
Ardrossan			29.87	758.7	43	6.1		SW			3		8					Overcast	William McNeil.
Armagh, Observatory			29.84	757.9	36.8	2.7		SSE	17	7.6			10					Gloomy	S. Call, for Dr. Robinson.
Birr Castle, (Parsonstown)			29.78	756.4	43.9	6.6		SSE			3		10					Raining	J. Dreyer.
Bradford			29.96	761.0	41.6	5.3		W			1		9			0.23	5.8	Gloomy	J. McLandsborough.
Bridgetown, (Barbados)			30.04	763.0	80.0	26.7		NE			3		7					*D. clouds	Sergt. J. F. Halanen, A. H.C
Cambridge, Observatory			30.14	765.5	44.2	6.8		W			2		0?			Blank	Blank	*D. clouds?	H. Todd.
Cardington			30.04	763.0	40.0	4.4		W			1		2					*D. clouds	John McLaren.
Carlisle																			T. Bell, for J. Cartmell
Chatham, School M. E			30.07	763.8	42.2	5.7		NW			2		0					Hazy	Maj. C. N. Martin, R.E
Dartmoor	28.62	726.9	30.15	765.8	41.0	5.3		W			2		4					*D. clouds	R. E. Power.
Davos Platz, (Switzerland)	24.75	628.6			27.8	− 2.3	66	Calm			0		10					Snowing	Francis Redford, M. A.
Donaghadee			29.86	758.4	43	6.1		SW			3		10					Raining	J. Mac Gowan.
Dover			30.03	762.7	43	6.1		W			3		3					¼ clouded	J. Costello.
Eccles, (near Manchester)			29.97	761.2	41.7	5.4		SW	1.0	0.4			10					Overcast	Thomas Mackereth.
Falmouth, Observatory			30.11	764.8	48.4	9.1		SW			3		7					Overcast	The Staff.
Fort Napier, (Natal)	27.69	703.3	29.93	760.2	72.3	22.4		E			1		10					Overcast	P'vt. G. Salmon, A. H. C
Free Town, (Sierra Leone)			29.95	760.7	87.0	30.6		N			1		3					*D. clouds	
Galway, Queen's College			29.66	753.4	46	7.8		S			5		4					*D. clouds	Prof. A. H. Curtis.
Gibraltar, (Mediterranean)			30.40	772.1	60.0	15.6		NW			3		1					Blue sky	Corpl. C. Aitken, A.H.C.
Glasgow, Observatory			29.43	747.5	40.2	4.6		SW			1		4					*D. clouds	Lewis Stuart.
Great Yarmouth			29.96	761.0	42	5.6		NW			3		5					Misty	G. T. Watson.
Greenwich, Royal Obs'y			30.07	763.8	42.6	5.9		WNW			1		0			Blank	Blank	Blue sky	The Staff, for G. B. Airy.
Guernsey			30.14	765.5	48	8.9		WNW			2		5					Showery	Dr. S. E. Hoskins.
Helston			30.10	764.5	49	9.4		SW			4		6c			0.35	8.4	Fine	M. P. Moyle.
Holyhead			29.92	760.0	42	5.6		S			2		10					Raining	John Tilston.
Kew, Observatory			30.08	764.0	43.6	6.4		WNW	15	6.7			2					*D. clouds	The Staff.
Kingstown			29.88	758.9	41	5.0		SE			4		10					Raining	George Mitchell.
Leicester Museum			30.03	762.7	43.0	6.1		SW			1		3					Hazy	Wm. J. Harrison, F.G.S.
Malta, (Mediterranean)			29.93	760.2	56.4	13.6		W			3		8k					*D. clouds	Corp'l. P. Bravis, A.H.C.
Nairn			29.78	756.4	38	3.3		Calm			0		2					¼ clouded	W. D. Penny.
Nassau, (Bahamas)			30.09	764.3	76.2	24.6		NE			1		1					*D. clouds	Surg. Maj. Henry.
Nottingham, Observatory			30.03	762.7	44.2	6.8		SW			2		5c		NW	0.090	2.29	*D. clouds	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			30.00	762.0	43.5	6.4		WSW			2		10					Overcast	Rev. Stephen Whitty.
Oxford, Radcliffe Obs'y			30.07	763.8	42	5.6		WSW			1		8c					Overcast	J. Lucas.
Plymouth			30.11	764.8	44.8	7.1		SW			1		4					*D. clouds	John Merrifield.
Roche's Point			29.87	758.7	49	9.4		SSW			6		10					Raining	W. Kennedy.
Saint Ann's Head			29.99	761.7	47	8.3		SW			3		10					Overcast	John C. Walker.
Saint Helier, (Jersey)			30.16	766.1	49.0	9.4		W			4		8					¾ clouded	A. P. Amy.
Sandwick Manse, (Orkneys)			29.76	755.9	39.4	4.1		W	19	8.5			3					*D. clouds	Rev. C. Clouston, LL. D.
Scarborough																			F. Shaw.
Scutari Cemetery, (Turkey)			29.80	756.9	49.8	9.9		NNE			3		9					Misty	Sergt. W. H. Lyne.
Sheffield			29.88	761.5	41.1	5.1		WSW			1		5			0	0	*D. clouds	W. F. Cooper.
Silloth Rectory			29.91	759.7	44.3	6.8	83	NW			1		6			0.175	4.45	*D. clouds	Rev. Francis Redford.
Stonyhurst, Observatory			29.97	761.2	43.2	6.2		W			1		10s					Overcast	Rev. S. J. Perry.
Stornoway, Lews C., (Hebr.)			29.75	755.6	36	2.2		SW			1		10					Overcast	John Smith.
Stratfield Turgiss			30.09	764.3	43.3	6.3		NW			1		2					*D. clouds	Rev. Charles H. Griffith.
Thurso			29.74	755.4	38	3.3		WSW			3		7					*D. clouds	John Trotter.
Truro, Royal Institution			30.08	764.0	52	11.1		SW			6		8					Gloomy	W. Newcombe.
Valencia, Observatory			29.76	755.9	51.6	10.6		WSW	43	19.2			10					*D. clouds	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man)					45	7.2		SW			4		5			0.20	5.1		Henry Mercer.
Cape Good Hope, Obs'y			30.08	764.0	76.8	24.9	48	SE	27	12.1		0	0						The Staff, for E.J. Stone.
Hobart Town, (Tasmania)			29.70	754.4	72.0	22.2	100	S			1		0			0	0		Francis Abbott, F.R.A.S.
Leith, Restalrig Park			29.90	759.4	41.0	5.0		W			2	5ck				0.08	2.0	Fine	Andrew Gibb.
Mauritius, Observatory			30.02	762.5	83.0	28.3	64	WNW	7.5	3.4		0	7		NW	0.27	6.9	*D. clouds	C. Meldrum.
Melbourne, Observatory			29.72	754.9	69.0	20.6	66	NE	3	1.3			3			0	0	Fine	R. L. J. Ellery.
Monach L't-house, (Hebrides)			29.77	756.1	44	6.7		S			4		10			0	0		J. Youngclause.
North Unst, (Shetland Is.)			29.61	752.1	40	4.4		W			7	0	3						Robert Burnet.

NOTE.—Generally, the originals do not give the relative humidity, rain-fall, or distinction between upper and lower clouds. The originals give the wind direction to 32 points and weather by the Beaufort notation. The originals give the barometer for Aberdeen, Cardington, Galway, Oxford, St. Helier, Sandwick, Scarborough, Stonyhurst, Leith, Monach and North Unst as read off and the cloudiness for Stornoway by the scale 0 to 4. The wind-force is given by the scale 0 to 12 in the official series; 0 to 6 in the sub-series; except in lbs. per square foot for Greenwich and Hobart Town. The rain-fall is measured at Aberdeen at 10 a. m.; Bradford, 9 a. m.; Hobart Town, 7:30 a. m.; Nottingham, 6 p. m.; Mauritius, 9 a. m., local time. The elevation of Dartmoor is 1,400 feet, or 426.7 meters; Davos Platz, 5,105? feet, or 1,556.0? meters; Fort Napier, 2,200 feet, or 670.6 meters. *Detached clouds.

By authority of the
MINISTER OF FOREIGN AFFAIRS.

COSTA RICA SERIES.

Furnished by the coöperation of Senor Federico Maison, Director of the Central Office of Statistics and Meteorology.

San José																		

DANISH SERIES.

Furnished by the coöperation of Captain N. Hoffmeyer, Director of the Royal Danish Meteorological Institute at Copenhagen.

Copenhagen			29.98	761.4	33.1	0.6	87	SE			4		10				
Fanöe			29.82	757.3	33.6	0.9	96	SE			4		10				
Godthaab, (Greenland)			28.95	735.4	6.3	−14.3	74	E			4		2				
Stykkisholm, (Iceland)			29.24	742.8	26.6	− 3.0	98	SW			2		5				
Thorshavn, (Faröe)			29.58	751.3	38.7	3.7	70	W			4		5				
Vestervig			29.83	757.7	31.6	− 0.2	92	SE			4		10				

NOTE.—The originals give the wind-force by the scale 0 to 6; occasionally, weather by Vienna symbols; no distinction between the amount of upper and lower clouds.

FRENCH SERIES.

Furnished by the cooperation of His Excellency, U. J. Le Verrier, Director of the Paris Observatory, and the respective Observers.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. Fr m—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters	Weather.	Observer.
Alengon	.....	.....	30.21	767.2	48.2	9	81	SW	.....	.....	1	.....	10	.....	.....	0.24	6.	Covered	Normal School.
Amiens	.....	.....	30.28	769.0	44.6	7.0	85	NNE	.....	.....	2	.....	5	.....	SW	0.079	2.0	Cloudy.....	Normal School.
Avignon	.....	.....	30.10	764.4	52.0	11.1	56	N	.....	.....	2	.....	0	.....	.....	0.04	1.	Clear.....	Normal School.
Bar-sur-Seine	.....	.....	30.16	766.1	45.5	7.5	66	NE	.....	.....	1	.....	8kn	.....	NNW	0.165	4.2	Very cloudy	C. Saillard.
Beaumette, (near Angers)	.....	.....	30.23	767 8	48.4	9.1	61	W	6.5	2.9	.....	.....	.....	.....	W	0.024	0.6	.....	Beaumette Observ'tory.
Beauvais	.....	.....	30.14	765.5	43.7	6.5	60	NW	.....	.....	3	.....	5	.....	NW	0.138	3.50	Cloudy.....	Normal School.
Besançon	.....	.....	30.19	766.9	42.8	6	82	SSW	.....	.....	3	.....	5	.....	W	0.165	4.2	Cloudy.....	Normal School.
Bourg en Bresse	.....	.....	30.21	768.0	43.7	6.5	79	NW	.....	.....	2	.....	5kn	.....	SSE	0.47	12.	Cloudy.....	Normal School.
Bourges	.....	.....	30.15	765.8	45.3	7.4	83	SW	.....	.....	2	.....	2	.....	SW	0.185	4.7	Slightly cl'dy	Normal School.
Brest	.....	.....	30.15	765.7	51.6	10.9	74	W	.....	.....	3	.....	2	.....	W	0.404	10.25	Squally.....	Naval Observatory.
Carcassonne	.....	.....	30.29	769.3	52.7	11.5	61	W	.....	.....	2	.....	2	.....	E	0.08	2.	Slightly cl'dy	Normal School.
Caen	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Chartres	.....	.....	30.17	766.4	49.8	9.9	73	NW	.....	.....	2	.....	10	.....	.....	0.177	4.5	Covered	Normal School.
Châlons-sur-Marne	.....	.....	30.12	765.0	46.6	8.1	57	NW	.....	.....	3	.....	5k	.....	SE	0.126	3.2	Cloudy	Normal School.
Clermont	.....	.....	30.21	767.4	46.6	8.1	59	NW	.....	.....	2	.....	5	.....	NW	0.076	1.9	Cloudy	Puy de Dome Obs'y.
Commercy	.....	.....	30.11	764.7	41.2	5.1	82	NW	.....	.....	1	.....	2kn	.....	W	0	0	Slightly cl'dy	Normal School.
Commune de Gréasque*	.....	.....	30.03	762.7	47.3	8.5	55	NW	.....	.....	6	.....	8	.....	NW	0.126	3.2	.....	M. Kina.
Grenoble	.....	.....	30.19	766.7	40.1	4.5	83	NE	.....	.....	2	.....	10n	.....	NE	0.63	16.	Raining	Normal School.
La Roche-sur-Yon	.....	.....	30.28	769.0	49.3	9.6	66	W	.....	.....	1	.....	5	.....	E	0.185	4.7	Cloudy.....	Normal School.
Le Mans	.....	.....	30.22	767.6	43.2	6.2	88	NW	.....	.....	4	.....	2	.....	NW	0.283	7.2	Cloudy	Normal School.
Lons-Le-Saulnier	.....	.....	30.18	766.5	44.4	6.9	71	NNE	.....	.....	2	.....	5	.....	E	0.457	11.60	Cloudy.....	Normal School.
Lorient	.....	.....	30.26	768.5	50.7	10.4	58	WSW	.....	.....	2	.....	2	.....	WNW	0.008	0.2	Slightly cl'd	Naval Observatory.
Mâcon	.....	.....	30.21	767.2	45.5	7.5	97	WNW	.....	.....	6	.....	5	.....	WNW	0.35	9.	Cloudy.....	Normal School.
Metz	.....	.....	30.13	765.4	41.9	5.5	81	W	.....	.....	4	.....	2	.....	W	0.091	2.3	.....	M. Schuster.
Mirecourt	.....	.....	30.09	764.2	41.4	5.2	74	W	.....	.....	4	.....	5	.....	NE	0	0	Cloudy.....	Normal School.
Nismes	.....	.....	30.10	764.4	52.2	11.2	57	N	.....	.....	2	.....	0	.....	.....	0.04	1.	Clear.....	Normal School.
Orleans	.....	.....	30.17	766.2	45.3	7.4	75	W	.....	.....	1	.....	0	.....	.....	0.102	2.6	Clear.....	Normal School.
Paris, Observatory	.....	.....	30.15	765.9	44.8	7.1	66	W	.....	.....	2	.....	5k	.....	NW	0.139	3.54	Cloudy.....	National Observatory.
Parthenay	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Pdvas	.....	.....	30.18	766.6	47.8	8.8	.....	NW	.....	.....	2	.....	2	.....	NW	0.098	2.5	Slightly cl'dy	Normal School.
Rochefort, Observatory	.....	.....	30.28	769.2	53.1	11.7	70	SW	.....	.....	3	.....	0	.....	.....	0	0	Blue sky.....	Naval Observatory.
Rouen	.....	.....	30.14	765.5	48.6	9.2	67	NNW	.....	.....	6	.....	2	.....	N	0.189	4.8	Slightly cl'dy	Normal School.
Saint Lo	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Tarbes	29.22	742.3	30.32	770.2	51.8	11	100	WNW	.....	.....	4	.....	2	.....	SE	0.181	4.6	Slightly cl'dy	Normal School.
Villefranche	.....	.....	30.37	771.5	42.6	5.9	84	NE	.....	.....	2	.....	10	.....	.....	0	0	Covered	Normal School.
Sub-Series.																			
Fort de France, Martinique	.....	.....	29.93	760.2	75.9	24.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	L'Abbé Marchési.
Marseilles	.....	.....	30.00	761.9	51.8	10.7	52	NW	.....	.....	8	.....	4	.....	.....	0.134	3.40	Partly cl'dy.	Marseilles Observatory.
Mont-Louis	24.96	634.0	30.28	769.0	32.7	0.4	66	SW	13.0	5.83	.....	.....	10	.....	.....	0.22	5.6	.....	—. Falguère.
Montsouris, Paris	.....	.....	30.14	765.6	45.5	7.5	69	WNW	.....	.....	3	.....	2	.....	NW	0.134	3.4	.....	Montsouris Observatory
Perpignan	.....	.....	30.24	768.0	51.1	10.6	52	N	22.4	10.00	.....	.....	5	.....	NW	0	0	.....	Dr. Fines.
Pic du Midi, (Summit,) H. P.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. Baylac.
Pic du Midi, (Plantade,) H. P.	22.56	572.9	.....	.....	20.5	— 6.4	.....	NW	.....	.....	1	.....	10	.....	.....	2.071	52.6	Snowy.....	General de Nansouty.
Saint Maur, (near Paris)	.....	.....	30.15	765.7	46 4	8.0	70	WNW	.....	.....	1	.....	3	.....	.....	0.27	6.9	Fair	E. Renou.
Toulouse	.....	.....	30.34	770.7	48.4	9.1	61	WNW	.....	.....	3	.....	4	.....	.....	0.016	0.4	.....	Toulouse Observatory.
Tours	.....	.....	30.23	767.8	47.7	8.7	67	WNW	.....	.....	2	.....	5	.....	WNW	0.106	2.7	.....	C. Marquet.
Versailles, (near Paris)	.....	.....	30.15	765.9	44.2	6.8	77	NNW	.....	.....	2	.....	3	.....	.....	0.158	4.01	Fair	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai)	.....	.....	30.48	774.1	37.4	3.0	83	E	6.2	2.75	.....	.....	6	.....	.....	0	0	.....	Marc Dechevrens, S. J.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

NOTE.—Generally, the originals give the wind-force by the scale 0 to 7; no distinction between upper and lower clouds, and, in the official series, the amount by the scale 0 to 4; the rain-fall as measured at 7, 8 or 9 a. m., local time; at Clermont, 9 a. m. of the following day; the weather in general terms as published. The elevation of Clermont is 388 meters, or 1,272.9 feet; Commune de Gréasque, 322 meters, or 1,056.4 feet; Tarbes, 308 meters, or 1,010 feet; Mont-Louis, 1,580.40 meters, or 5,2 8.8 feet; Pic du Midi, (Summit,) 2,877 meters, or 9,439.1 feet; Pic du Midi, (Plantade,) 2,366 meters, or 7,762.6 feet. In correcting the Mont-Louis barometric observations for altitude, the constant 135. millimeters has been added. *Bouches-du-Rhône

GERMAN SERIES.

Furnished by the coöperation of Professor Dr. G. Neumayer, Director of the German Naval Observatory, Hamburg.

Bamberg	.....	.....	29.91	759.7	35.4	1.9	91	W	.....	.....	3	.....	10	W	.....	0.055	1.4	Snowing.....	Prof. T. Hoh.
Berlin	.....	.....	29.98	761.6	37.0	2.8	83	S	.....	.....	2	.....	4	.....	.....	0	0	.....	Prof. Arndt.
Breslau	.....	.....	30.04	762.9	36.1	2.3	89	SE	.....	.....	4	.....	10	.....	.....	0	0	.....	Royal University Obs'y.
Carlsruhe	.....	.....	30.02	762.6	43.7	6.4	81	SW	.....	.....	3	.....	10	.....	.....	0.106	2.7	.....	A. Senz.
Cassel	.....	.....	29.90	759.5	38.8	3.8	90	SW	.....	.....	1	.....	10	SSW	.....	0.094	2.4	.....	Dr. H. Möhl.
Crefeld	.....	.....	29.92	760.0	44.6	7.0	85	NW	.....	.....	4	.....	9	.....	.....	0.12	3.	.....	Director Lose.
Emden	.....	.....	29.87	758.8	41.9	5.5	94	W	.....	.....	3	.....	10	.....	.....	0.035	0.9	.....	Prof. Prestel.
Frankfort on the Main	.....	.....	29.98	761.6	40.3	4.6	94	SSW	.....	.....	2	.....	10	.....	.....	0.094	2.4	Foggy	Physical Society.
Friedrichshafen	28.63	727.2	30.11	764.9	39.9	4.4	84	WSW	.....	.....	6	.....	10	.....	.....	0.043	1.1	Rain & snow	M. Wilhelm.
Hamburg	.....	.....	29.86	758.4	35.4	1.9	91	SE	.....	.....	4	.....	10ks	.....	.....	0.004	0.1	Light rain...	Captain F. Hegemann.
Kiel	.....	.....	29.85	758.2	35.2	1.8	87	SE	.....	.....	2	.....	10	.....	.....	0	0	.....	Prof. G. Karsten.
Königsberg, (Prussia)	.....	.....	30.20	767.1	23.4	— 4.8	89	SE	.....	.....	2	.....	5	.....	.....	0	0	.....	Prof. E. Luther.
Kosiin	.....	.....	30.10	764.4	30.6	— 0.8	.....	SE	.....	.....	1	.....	10	.....	.....	0	0	.....	H. Müller.
Leipsic	.....	.....	29.95	760.8	39.2	4.0	77	SSW	.....	.....	2	.....	8	WSW	.....	0	0	.....	Prof. Bruhns.
Memel	.....	.....	30.23	767.9	21.6	— 5.8	87	SE	.....	.....	4	.....	10ks	.....	.....	0.016	0.4	.....	Reinbrecht & Skalweit.
Münster	.....	.....	29.93	760.3	45.5	7.5	82	W	.....	.....	3	.....	10	.....	.....	0.059	1.5	.....	Prof. E. Heis.
Neufahrwasser	.....	.....	30.16	766.0	28.2	— 2.1	87	SE	.....	.....	2	.....	10	.....	.....	0.075	1.9	Smoke-haze.	A Lothe.
Posen	.....	.....	30.05	763.3	33.4	0.8	90	SE	.....	.....	5	.....	10	.....	.....	0	0	.....	Dr. Magener.
Strassburg, (in Alsace)	.....	.....	30.09	764.3	45.5	7.5	66	W	.....	.....	3	.....	10	W	.....	0.161	4.1	.....	Dr. Schur.
Stuttgart	.....	.....	29.98	761.5	42.4	5.8	79	W	.....	.....	4	.....	10	.....	.....	0.051	1.3	.....	Prof. Schoder.
Thorn	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Dr. Hasenbalg.
Treves, (Trier)	.....	.....	29.97	761.1	44.8	7.1	67	W	.....	.....	4	.....	10	.....	.....	0.142	3.6	Foggy	Prof. Flesch.
Weissenburg, (Bavaria)	28.42	721.8	29.97	761.3	36.7	2.6	84	SW	.....	.....	1	.....	10	SW	.....	0.024	0.6	.....	Dr. von Bebber.
Wustrow, Naval School	.....	.....	30.01	762.2	32 0	0.0	92	SSE	.....	.....	3	.....	10	.....	.....	0	0	.....	E. F. Schütz.
German Naval Series.																			

NOTE.—The elevation of Friedrichshafen is 413.4 meters, or 1,356 3 feet; Weissenburg, 431 meters, or 1,414.0 ft. In the originals the distinction between the amount of upper and lower clouds is not made. It is not always certain that the remarks in the weather column refer to the moment of observation.

GREEK SERIES.

Furnished by the cooperation of Professor Dr. J. F. Julius Schmidt, Director of the Royal Observatory at Athens.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Athens			29.81	757.1	59.0	15.0		W										½clear	

Note.—The originals give the barometer corrected, but not reduced to sea-level; occasionally the kind of clouds; the weather as published. They omit the humidity, wind-force, amount of cloudiness and rain-fall.

ITALIAN SERIES.

Furnished by the coöperation of His Excellency the Minister of Agriculture, Industry and Commerce, and the respective Observers.

Udine			30.31	769.9	47.7	8.7	54	E	0.7	0.3			3			0	0		Prof. Giovanni Godig.
Stelvio	22.02	559.3			23.0	— 5.0		SE			2		7	SW		0	0		Signora Ernesta Manfredi.
Valdobbia	21 97	558.0			21.4	— 5.9	75	W			4		10	WNW		0	0		Ab. Dom. Mongini.
Padua			29.92	760.0	45.3	7.4	56	NNE	2.7	1.1			1			0	0		Prof. Dott. Lorenzoni.
Vicenza			29.93	760.3	47.7	8.7	51	E			1		5	E		0	0		Conte Alm. Da Schio.
Verona			29.95	760.6	46.4	8.0	71	W			1		10			0	0		Dott. B. Bertoncelli.
Bergamo	28 59	726.2	29.95	760.7	42.8	6.0	70	SW			1		9			0	0		Prof Trionfini Carlo.
Domodossola			29.97	761.3	41.0	5.0	58	S			4		9			0	0		Prof. Giuseppe Ghiza.
Milan			29.98	761.6	42.3	5.7	81	N			1		8	N		0	0		Ab. Gio. Capelli.
Pavia			29.97	761.3	41.5	5.3	69	W			1		9			0	0		Prof. Gio. Cantoni.
Moncalieri			30.00	761.9	38.5	3.6	82	NNE	1.3	0.6			9	SE		0	0		Prof. P. F. Denza.
Mondovi	28.02	711.7	30.00	762.0	40.6	4.8	41	NE			2		10			0	0		Prof. D. C. Bruno.
Porto Maurizio			29.98	761.4	53.2	11.8	34	E			2		9			0	0		Prof. L. Vassallo.
Genoa			29.93	760.2	50.9	10.5	32	N	4.9	2.2			10	S		0	0		Prof. G. M. Garibaldi.
Piacenza			29.98	761.4	39.9	4.4	75	NW	4.9	2.2			10			0	0		Dott. G. Manzi.
Parma			29.98	761.4	42.3	5.7	74	W			4		9			0	0		Prof. P. Pigorini.
Florence			29.93	760.3	46.9	8.3	74	N			2		5	NW		0	0		Cav. F. Meucci.
Leghorn			29.92	759.9	52.5	11.4		ENE	4.9	2.2			4	N		0	0		Prof. P. Monte.
Siena	28.68	728.5	29.92	760.0	46.2	7.9	59	N	0	0			4	W		0	0		Prof. L. Toscani.
Urbino	28.37	720.7	29.98	761.5	43.5	6.4	72	NNE			4		2			0	0		Prof. P. Serpieri.
Pesaro			29.93	760.1	45.5	7.5	73	WNW	9.8	4.4			4	N		0	0		Prof. Luigi Guidi.
Ancona			29.89	759.3	46.6	8.1	83	WNW			4		10			0	0		Prof. F. De— Bosis.
Grosseto			29.92	760.0	52.3	11.3	47	NE			2		5	SE		0	0		Avv. P. Ponticelli.
Rome			29.89	759.3	51.3	10.7	50	NNE	8.1	3.6			1			0	0		Prof's. P. Secchi & L. Respighi.
Naples, O. U.			29.87	758.7	53.6	12.0	58	N			2		9	NW		0	0		Prof. L. Palmieri.
Lecce			29.88	759.0	52.9	11.6	66	NNW	12.5	5.6			5	S		0.067	1.7	Raining	Prof. C. De—Giorgi.
Cosenza			29.90	759.5	52.9	11.6	69	NE	8.1	3.6			9			0	0		Prof. F. D. Conti.
Cagliari																			Prof. A. Pacinotti.
Ilposto, (Sicily)			29.87	758.6	56.3	13.5	59	S			2		6	NE		0	0		Prof. F. Cafiero.
Palermo			29.90	759.4	58.1	11.7	66	W	6.5	2.8			10			0.460	12.2	Raining	Prof. G. Cacchatore.
Caltanissetta	27.84	707.1	29.83	757.7	48.2	9.0	63	W			2		6	S		0	0		Prof. A. Pagani.
Siracusa			29.88	759.0	60.6	15.9	42	NNW			1		9	SW		0	0		Prof. V. Giuliano.
Sub-Series.																			
Naples, S. R.			29.90	759.4	50.0	10.0	60	NE	0	0			6	E		0	0		Prof. F. Brioschi

Note.—The originals give the wind-force by the scale 0 to 4, or the velocity in kilometers per hour; generally, no distinction between upper and lower clouds; occasionally the weather by the Vienna symbols. The elevation of Stelvio is 2,543.0 meters, or 8,342.9 feet; Valdobbia, 2,548.0 meters or 8,359.3 feet; Bergamo, 379.6 meters, or 1,245.3 feet; Mondovi, 556 meters, or 1,824.2 feet; Siena, 348.5 meters, or 1,143.3 feet; Urbino, 451 meters, or 1,479.7 feet; Caltanissetta, 570.3 meters, or 1,871.0 feet.

Furnished by the coöperation of the Imperial University of Tokei, Japan.

JAPANESE SERIES.

Tokei			30.30	769.6	26	— 3.3		Calm	0	0			0			0	0		Prof. P. V. Veeder.

Note.—The originals give the amount of cloudiness by the scale 0 to 4 without distinguishing between upper and lower clouds. The rain-fall is measured at 7 a. m., local time.

By authority of the Secretary of Public Works.

MEXICAN SERIES.

Furnished by the coöperation of Senor Mariano Barcena, Director of the Central Meteorological Observatory in the City of Mexico.

Mexico																			Mariano Barcena. Vicente Reyes. Miguel Perez. (Engineers in charge.)

Note.—The elevation of Mexico is 2,290 meters, or 7,512.9 feet. The rain-fall is measured at 6 a. m., local time.

NETHERLANDS' SERIES.

Furnished by the cooperation of Professor Buys Ballot, Director of the Royal Meteorological Institute of the Netherlands at Utrecht.

Flushing			30.01	762.2	44.2	6.8		NW			5					0.079	2.0		
Groningen			29.74	755.4	40.1	4.5		WSW			4					0.098	2.5		
Helder			29.84	758.0	44.4	6.9		W			5					0.012	0.3		
Utrecht			29.86	758.5	44.6	7.0	85	W			4		10			0.161	4.1	Dull	

Note.—The originals give the wind-pressure in kilograms per square meter; for Utrecht, they give the weather as published, from which the amount of cloudiness is taken by the scale 0 to 4, without distinguishing between upper and lower clouds. It is assumed that the barometer readings have been reduced to sea-level.

NORWEGIAN SERIES.

Furnished by the cooperation of Professor H. Mohn, Director of the Royal Norwegian Meteorological Institute at Christiania.

Bergen			29.78	756.3	32.7	0.4	92	SE	6.0	2.7			10			0.114	2.9		
Bröno			29.80	756.8	23.0	— 5.0	52	S	35.8	16			4						
Christiania			30.08	764.1	18.0	— 7.8	89	ENE	3.1	1.4			10			0.170	7.0	Snowing	
Tromsö			29.95	760.7	14.4	— 9.8	87	SW	4.5	2			0			0	0		

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols. The cloudiness and weather at Bergen refer to 2h., p. m., local time, instead of 1h., 4 m.

PORTUGUESE SERIES.

Furnished by the coöperation of J. C. de Brito Capello, Director of the Meteorological Observatory of the Infante Don Luiz at Lisbon.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Angra, (Azores)	.....	.....	30.47	774.0	58.6	14.8	91	W	3.1	1.4	.....	.....	6	.....	.....	0	0	.....	Dr. J. A. Sampaio.
Campo Major	.....	.....	30.44	773.1	52.9	11.6	56	WNW	8.7	3.9	.....	.....	6	WNW	.....	0	0	.....	Dr. A. M. R. dos Santos.
Funchal, (Madeira)	.....	.....	30.47	773.9	63.1	17.3	68	E	5.6	2.5	.....	.....	2	.....	.....	0	0	.....	Capt. D. A. de Cunha.
Lisbon	.....	.....	30.53	775.4	55.0	12.8	61	N	6.3	2.8	.....	.....	8	NW	.....	0.004	0.1	.....	The Observatory.
Ponta Delgada, (Azores)	.....	.....	30.52	775.3	60.4	15.8	93	SW	4.9	2.2	.....	.....	3	.....	.....	0.094	2.4	.....	

NOTE.—The originals give the wind-velocity in kilometers per hour; occasionally, the weather by the Vienna symbols; the amount of cloudiness without distinguishing between upper and lower clouds; the barometer corrected but not reduced to sea-level. The rain-fall at Lisbon is measured at noon, instead of 0 h. 6 m., p. m.

RUSSIAN SERIES.

Furnished by the cooperation of Professor H. Wild, Director of the Imperial Central Physical Observatory of Russia, at St. Petersburg.

Warsaw	.....	.....	30.16	766.1	24.6	— 4.1	87	SE	11	5	.....	.....	10	.....	.....	.....	.....	.....	Astronomical Obs.
Wilna	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Astronomical Obs.
Dorpat	.....	.....	30.47	774.0	14.4	— 9.8	85	ESE	7	3	.....	.....	8	.....	.....	.....	.....	.....	Physical Cabinet.
St. Petersburg	.....	.....	30.61	777.5	1.8	—16.8	93	ESE	9	4	.....	.....	8	.....	.....	.....	.....	.....	Central Physical Obs.
Kuopio	.....	.....	30.52	775.3	— 4.9	—20.5	100	SE	7	3	.....	.....	10	.....	.....	.....	.....	.....	Ch. Forsten.
Kieff	.....	.....	30.34	770.6	11.3	—11.5	93	ENE	4	2	.....	.....	10	.....	.....	.....	.....	.....	Physical Cabinet.
Nikolaiev	.....	.....	30.13	765.2	25.3	— 3.7	93	NE	9	4	.....	.....	10	.....	.....	.....	Snowing	.....	Kurdakof
Kertch	.....	.....	29.98	761.4	35.1	1.7	90	ENE	16	7	.....	.....	10	.....	.....	.....	.....	.....	Lagorio.
Moscow	.....	.....	30.76	781.3	16.5	— 8.6	94	SSW	9	4	.....	.....	10	.....	.....	.....	.....	.....	Meteorological Obs.
Lugan	.....	.....	30.30	771.1	14.7	— 9.6	74	ENE	27	12	.....	.....	10	.....	.....	.....	.....	.....	Meteorological Obs.
Archangel	.....	.....	30.63	778.0	— 4.4	—20.2	88	SW	9	4	.....	.....	0	.....	.....	.....	.....	.....	Ogorodnikof.
Tiflis	28.91	734.3	30.39	771.9	30.0	— 1.0	95	Calm	0	0	.....	.....	9	.....	.....	.....	.....	.....	Physical Observatory.
Astrakhan	.....	.....	30.55	776.0	16.0	— 8.9	78	ENE	7	3	.....	.....	2	.....	.....	.....	.....	.....	Sebastianoff.
Kasan	.....	.....	30.74	780.8	7.3	—13.7	95	NNW	2	1	.....	.....	1	.....	.....	.....	.....	.....	Physical Cabinet.
Orenburg	.....	.....	30.54	775.8	—10.7	—23.7	87	N	16	7	.....	.....	3	.....	.....	.....	.....	.....	Tschernischei.
Ekaterinburg	29.42	747.3	30.47	773.6	8.8	—12.9	88	WSW	4	2	.....	.....	5	.....	.....	.....	.....	.....	Meteorological Obs.
Nukuss	.....	.....	30.41	772.3	19.8	— 6.8	89	W	9	4	.....	.....	10	.....	.....	.....	.....	.....	
Kasaly	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Bobrof.
Tashkend	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Michelson.
Barnaul	.....	.....	30.34	770.6	—18.6	—28.1	85	Calm	0	0	.....	.....	1	.....	.....	.....	.....	.....	Meteorological Obs.
Yeniseisk	.....	.....	29.84	757.8	0.0	—17.8	76	S	9	4	.....	.....	7	.....	.....	.....	.....	.....	Marks.
Irkutsk	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Usolzef.
Peking, (China)	.....	.....	30.41	772.5	21.9	— 5.6	75	Calm	0	0	.....	.....	2	.....	.....	.....	.....	.....	Physical Observatory.
Nertchinsk	27.98	710.8	30.41	772.3	—23.8	—31.0	94	Calm	0	0	.....	.....	0	.....	.....	.....	.....	.....	Meteorological Obs.
Vladivostock	.....	.....	30.28	769.2	11.8	—11.2	75	Calm	0	0	.....	.....	0	.....	.....	.....	.....	.....	
Nikolaievsk, on the Amoor	.....	.....	.....	.....	— 4.9	—20.5	.....	W	9	4	.....	.....	0	.....	.....	.....	.....	.....	

NOTE.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols; they omit the rain-fall. The elevation of Tiflis is 409 meters, or 1,341.8 feet; Ekaterinburg, 306.4? m., or 1,005.2? ft.; Tashkend, 494.2? m., or 1,621.3? ft.; Irkutsk, 392 m., or 1,286 ft.; Nertchinsk, 502.0? m., or 1,942.2? ft.

SPANISH SERIES.

Furnished by the coöperation of Antonio Aguilar, Director of the Royal Observatory at Madrid, and of Don Cecilio Pujazon, Captain R. N. Director of the Naval Observatory at San Fernando.

Madrid	.....	.....	30.44	773.2	48.0	8.9	58	S	3.0	1.33	.....	2	0	NW	.....	0	0	Light clouds	Royal Observatory.
San Fernando	.....	.....	30.47	773.9	56.8	13.8	69	NNW	9.2	4.1	.....	3	2	NW	N	0	0	.....	Naval Observatory.

NOTE.—The originals give the weather in general terms, as published; rain-fall for San Fernando from preceding to following midnight; wind-velocity for Madrid in kilometers per hour.

SWEDISH SERIES.

Furnished by the coöperation of Professor R. Rubenson, Director of the Royal Swedish Meteorological Institute, at Stockholm, and of Dr. H. H. Hildebrandsson, Chief of the Meteorological Division of the Upsala Observatory.

Haparanda	.....	.....	30.39	772.0	— 2.6	—19.2	88	S	.....	.....	2	.....	10	.....	.....	0	0	.....	
Umea	.....	.....	30.37	771.3	3.6	—15.8	90	NW	.....	.....	2	.....	9	.....	.....	0.	0	.....	
Hernosand	.....	.....	30.22	767.8	9.0	—12.8	100	NE	.....	.....	2	.....	10	.....	.....	0.079	2.0	Showing	
Stockholm	.....	.....	30.14	765.5	29.1	— 1.6	92	ESE	.....	.....	2	.....	10	.....	.....	0.098	2.5	.....	
Wisby	.....	.....	30.18	766.0	29.5	— 1.4	92	SSE	.....	.....	4	.....	10	.....	.....	0.091	2.3	.....	
SUB-SERIES.																			
Upsala	.....	.....	30.16	765.9	28.8	— 1.8	95	SE	6.3	2.8	.....	.....	10	.....	.....	0.022	0.56	Showing	Dr. Hildebrandsson.

NOTE.—The originals give the wind-force by the scale 0 to 6, and Upsala also velocity in meters per second; occasionally, the weather by the Vienna symbols, or in general terms; no distinction between the amount of upper and lower clouds. The rain-fall is measured at 8 a. m., local time.

SWISS SERIES.

Furnished by the coöperation of Professor R. Wolf, Director of the Observatory at Zurich, and of Professor E. Plantamour, Director of the Observatory at Geneva.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Geneva	28.71	729.2	30.17	766.4	41.9	5.5	83	S	.....	.....	1	.....	9	.....	.....	0.087	2.2	Covered	The Observatory.
Zurich	28.44	722.4	30.13	765.4	37.9	3.3	90	W	.....	.....	1	.....	9	.....	.....	0.197	5.0	Covered	The Observatory.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—For Geneva the corresponding departures from the normal values are: Barometer, +1.6 mm; Thermometer, +4.1 cent.; Relative Humidity, +4 per cent.

NOTE.—The rain-fall is measured at Zurich at 7 a. m. on the following day. The originals give the barometer corrected but not reduced to sea-level; the wind-force by the scale 0 to 4 for Zurich; the amount of cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The elevation of Geneva is 408 meters, or 1,339 feet, and that of Zurich 470 meters, or 1,542 feet.

TURKISH SERIES.

Furnished by the coöperation of A. Coumbary, Effendi, Director of the Central Observatory at Constantinople, and of Professor C. V. A. Van Dyck, Superintendent of the Lee Observatory at Beirut.

Constantinople	.....	.....	29.85	758.2	48.2	9.0	93	NNE	8	3.5	.....	.....	8	.....	N	0.069	17.0	.....	
Fao, (Persian Gulf)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Salonica	.....	.....	29.84	757.8	57.6	14.2	.....	N	.....	.....	1	.....	5	.....	.....	Blank	Blank	.....	
Valona	.....	.....	29.86	758.4	53.1	11.7	.....	W	.....	.....	1	.....	10	.....	.....	.....	.....	.....	
Varna	.....	.....	29.88	759.0	37.4	3.0	.....	SE	.....	.....	2	.....	10	.....	.....	Blank	Blank	.....	
SUB-SERIES.																			
Beirut, (Syria,) Lee Obs'y	.....	.....	30.05	763.3	66.9	19.4	57	NNE	.....	.....	2	.....	8ck	.....	.....	0	0	*D. clouds.....	Prof. C. V. A. Van Dyck

NOTE.—The originals give the wind-force by the scale 0 to 7, (except Beirut, by the scale 0 to 12, and Constantinople velocity in meters per second;) the weather in general terms as published; no distinction between upper and lower clouds, and, except Constantinople and Beirut, the amount by the scale 0 to 4. It is assumed that the barometer is reduced to sea-level. * Detached clouds.

CANADIAN SERIES.

Furnished by the coöperation of Professor G. T. Kingston, Director of the Magnetic Observatory at Toronto, and Superintendent of the Meteorological Office of the Dominion of Canada, and the respective Observers. Those marked with a star (*) are also telegraphed daily to the office of the Chief Signal Officer, U. S. Army.

Bathurst, N. B	.....	.....	30.26	768.6	—16.5	—26.9	69	SW	2	0.9	.....	.....	10	.....	.....	0	0	.....	Hon. J. Ferguson.
Brockville, Ontario	.....	.....	30.14	765.5	— 1	—18.3	.....	NE	3	1.3	.....	.....	10s	.....	NE	0	0	C.oudy.....	W. R. Bigg.
*Chatham, N. B	.....	.....	30.30	769.6	—24	—31.1	100	Calm	0	0	.....	5ck	5ks	W	W	0	0	Fair.....	G. A. Blair.
Charlottetown, P. E. Island	.....	.....	30.31	769.9	—11	—23.9	91	Calm	0	0	.....	5c	0	.....	.....	0.025	0.63	Fair.....	H. J. Cundall, C. E.
Cornwall, Ontario	.....	.....	30.23	767.8	— 6.6	—21.4	77	W	.....	.....	1	.....	10s	.....	.....	Inap.	Inap.	Dull	James Smith, M. A.
Dalhousie, N. B	.....	.....	30.24	768.1	.....	.....	.....	W	.....	.....	1	.....	.....	.....	.....	0	0	Clear.....	H. A. Johnson.
Esquimault, B. C	.....	.....	30.06	763.5	41.1	5.1	92	SE	.....	.....	.....	.....	10n	.....	.....	†0.87	†22.1	.....	W. H. Bevis.
Fredericton, N. B	.....	.....	30.38	771.6	—21.2	—29.6	100	Calm	0	0	.....	2c	0	W	.....	0	0	Fair.....	Prof. Harrison.
*Fort Garry, Manitoba	.....	.....	30.52	775.2	—36	—37.8	100	W	5	2.2	.....	0	0	.....	.....	0	0	Clear.....	James Stewart.
Goderich, Ontario	.....	.....	29.98	761.5	14.6	— 9.7	90	NE	.....	.....	2	10k	0	N	.....	0	0	Dull	H. J. Strang, M. A.
Granton, Ontario	28.77	730.7	29.97	761.2	10.6	—11.9	.....	E	.....	.....	1	.....	10n	.....	.....	0.100	2.54	Cloudy.....	James Grant.
*Halifax, N. S	.....	.....	30.33	770.4	— 4	—20.0	92	W	3	1.3	.....	0	0	.....	.....	Inap.	Inap.	Clear.....	F. Allison, M. A.
Hamilton, Ontario	.....	.....	29.89	759.2	13.9	—10.1	76	SW	.....	.....	1	6cs	0	SW	.....	0	0	Cloudy.....	G. Dickson.
Heart's Content, N. F	.....	.....	29.83	757.7	4	—15.6	100	W	.....	.....	7	2k ?	0?	.....	.....	0.02	0.5	Snowing?....	E. Weedon.
*Kingston, Ontario	.....	.....	30.14	765.5	0	—17.8	67	NE	1	0.4	.....	.....	10s	.....	.....	0	0	Cloudy.....	S. Woods, M. A.
*Montreal, Quebec	.....	.....	30.23	767.8	—17	—27.2	94	N	6	2.7	.....	.....	10n	.....	.....	0	0	Cloudy.....	C. H. McLeod, C. E.
*Ottawa, Ontario	.....	.....	30.17	766.3	—13	—25.0	85	NE	1	0.4	.....	.....	10n	.....	NE	0	0	Threatening	J. B. Haney.
*Parry Sound, Ontario	.....	.....	30.06	763.5	6	—14.4	84	E	7	3.1	.....	.....	10n	.....	E	0	0	Cloudy.....	Rev. R. Mosley.
Port Dover, Ontario	.....	.....	29.96	761.0	16	— 8.9	83	NE	4	1.8	.....	.....	Haze	.....	.....	0	0	Cloudy.....	H. Morgan.
Port Hastings, N. S	.....	.....	30.27	768.8	— 5.0	—20.6	.....	NW	4	1.8	.....	.....	.....	.....	.....	Inap.	Inap.	Fine.....	Peter Grant.
Port Stanley, Ontario	.....	.....	29.94	760.5	18	— 7.8	86	E	5	2.2	.....	.....	10n	.....	E	Inap.	Inap.	Cloudy.....	M. Payne.
*Quebec, Quebec	.....	.....	30.29	769.4	—15	—26.1	72	Calm	0	0	.....	.....	10n	.....	.....	0	0	Cloudy.....	Capt. Ashe, R. N.
*Rockliffe, Ontario	.....	.....	30.16	766.1	— 7	—21.7	88	E	6	2.7	.....	.....	10s	.....	W	0	0	Cloudy.....	
St. John, N. B	.....	.....	30.39	771.9	—10	—23.3	76	Calm	0	0	.....	0	0	.....	.....	0.110	2.79	Clear	G. Murdoch, C. E.
*Saugeen, Ontario	.....	.....	29.99	761.7	11	—11.7	69	Calm	0	0	.....	10cs	0	.....	.....	0	0	Cloudy.....	K. Stewart.
Stayner, Ontario	.....	.....	30.05	763.3	9	—12.8	69	SE	3	1.3	.....	.....	10n	.....	SE	0	0	Cloudy.....	R. J. Cole.
Stratford, Ontario	28.59	726.2	29.99	761.7	10.1	—12.2	94	E	5	2.2	.....	.....	10s	.....	.....	0	0	Cloudy.....	C. J. MacGregor, M. A
*Sydney, C. B	.....	.....	30.26	768.6	— 4	—20.0	93	W	13	5.8	.....	0	2ks	.....	W	0.07	1.8	Clear	T. C. Hill.
*Toronto, Ontario	.....	.....	30.01	762.2	16	— 8.9	90	NE	12	5.4	.....	.....	10s	.....	.....	0	0	Cloudy.....	Magnetic Observatory.
Woodstock, Ontario	.....	.....	30.01	762.2	11.6	—11.3	90	NW	10	4.5	.....	7cs	0	.....	.....	0.45	11.4	Cloudy.....	J. Montgomery.
SUB-SERIES.																			
St. Johns, Newfoundland	.....	.....	29.86	758.4	4.0	—15.6	.....	W	.....	.....	.....	10k	10s	W	.....	Inap	Inap.	Stormy.....	John Delany.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
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NOTE.—The originals for Brockville, Charlottetown, Port Dover, Port Stanley, Stayner, St. Johns, N. F. and those telegraphed, give the amount of cloudiness by the scale 0 to 4. The elevation of Granton is 1,015 feet, or 309.4 m.; Stratford, 1,182 feet, or 360.3 m. † Precipitation for 48 hours.

UNITED STATES SERIES.

Furnished by the coöperation of Bvt. Brig. Gen. Albert J. Myer, Chief Signal Officer, U. S. Army.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er. 0—10.	Clouds. Amount. Low'r. 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain fall or melted snow in the past 24 hours. Inches	Rain fall or melted snow in the past 24 hours. Millimeters	Weather	Observer.
Albany, N. Y.	.....	.....	30.23	767.8	4	—15.6	72	Calm	0	0	.....	.....	10s	.....	.....	0	0	Cloudy	
Alpena, Mich.	.....	.....	29.97	761.2	13	—10.6	81	NW.	3	1.3	.....	.....	10n	.....	.....	0.04	1.0	Light snow	
Atlantic City, N. J.	.....	.....	30.10	764.5	33	0.6	100	SE	10	4.5	.....	.....	10n	.....	SE	0.03	0.8	Light rain	
Augusta, Ga.	.....	.....	30.00	762.0	61	16.1	97	Calm	0	0	.....	.....	10s	.....	.....	0.01	0.3	Cloudy	
Baltimore, Md.	.....	.....	30.10	764.5	32	0.0	89	NE	5	2.2	.....	.....	10n	.....	.....	0.11	2.8	Hailing	
Barnegat, N. J.	.....	.....	30.11	764.8	32	0.0	95	SE	14	6.3	.....	.....	10n	.....	.....	0.15	3.8	Heavy snow	
Bismarck, Dakota	28.52	724.4	30.49	774.4	—23	—30.6	57	NW	6	2.7	.....	0	0	.....	.....	0.26	6.6	Clear	
Boston, Mass.	.....	.....	30.27	768.8	11	—11.7	79	NW	2	0.9	.....	.....	10s, fg	.....	.....	0	0	Cloudy	
Breckenridge, Minn.	.....	.....	30.40	772.1	—22	—30.0	61	N	24	10.7	.....	0	0	.....	.....	0.01	0.3	Clear	
Buffalo, N. Y.	.....	.....	29.92	760.0	18.0	— 7.8	68	NE	5	2.2	.....	.....	Fog	.....	.....	0.04	1.0	Foggy	
Burlington, Vt.	.....	.....	30.20	767.1	8	—13.3	78	S	1	0.4	.....	.....	10s	.....	.....	0	0	Cloudy	
Cairo, Ill.	.....	.....	29.61	752.1	36	2.2	100	N	5	2.2	.....	.....	10n	.....	.....	0.58	14.7	Light rain	
Cape Hatteras, N. C.	.....	.....	29.98	761.5	52	11.1	100	SW	10	4.5	.....	.....	Fog	.....	.....	0.72	18.3	Foggy	
Cape Henry, Va.	.....	.....	30.01	762.2	41	5.0	96	E	4	1.8	.....	.....	10n	.....	.....	0.59	15.0	Light rain	
Cape Lookout, N. C.	.....	.....	30.05	763.3	49	9.4	100	SW	10	4.5	.....	.....	Fog	.....	.....	0	0	Foggy	
Cape May, N. J.	.....	.....	30.07	763.8	35	1.7	90	E	14	6.3	.....	.....	10n	.....	.....	0.12	3.0	Light rain	
Charleston, S. C.	.....	.....	30.05	763.3	60	15.6	94	S	10	4.5	.....	.....	Fog	.....	.....	0	0	Foggy	
Cheyenne, Wyoming	23.81	604.8	29.75	755.6	— 8	—22.2	100	N	32	14.3	.....	.....	10n	.....	.....	Inap.	Inap.	Light snow	
Chicago, Ill.	.....	.....	29.76	755.9	26	— 3.3	88	NE	10	4.5	.....	.....	10n	.....	.....	Inap.	Inap.	Light snow	
Cincinnati, Ohio.	.....	.....	29.69	754.1	34	1.1	79	SE	3	1.3	.....	.....	10s	.....	.....	0.30	7.6	Cloudy	
Cleveland, Ohio.	.....	.....	29.86	758.4	24	— 4.4	87	Calm	0	0	.....	.....	10s	.....	.....	0.12	3.0	Cloudy	
Corsicana, Tex.	.....	.....	29.70	754.4	53	11.7	93	SW	12	5.4	.....	.....	10s	.....	.....	0.05	1.3	Cloudy	
Davenport, Iowa.	.....	.....	29.72	754.9	17	— 8.3	83	NE	1	0.4	.....	.....	10n	.....	.....	0.08	2.0	Light snow	
Denison, Tex.	.....	.....	29.67	753.6	50	10.0	58	S	6	2.7	.....	.....	9s	.....	S	Inap.	Inap.	Cloudy	
Denver, Col.	24.65	626.1	29.87	758.7	5	—15.0	100	NE	8	3.6	.....	.....	10n	.....	.....	0.30	7.6	Light snow	
Detroit, Mich.	.....	.....	29.88	758.9	20	— 6.7	85	NE	2	0.9	.....	.....	10s	.....	.....	0	0	Cloudy	
Dodge City, Kan.	26.93	684.0	29.30	744.2	17	— 8.3	83	N	60	26.8	.....	.....	10n	.....	N	0.02	0.5	Light snow	
Dubuque, Iowa.	.....	.....	29.82	757.4	12	—11.1	80	SE	6	2.7	.....	.....	10n	.....	.....	0.02	0.5	Light snow	
Duluth, Minn.	.....	.....	30.25	768.3	—10	—23.3	77	N	18	8.0	.....	5c	0	W	.....	0.42	10.7	Fair	
Eastport, Me.	.....	.....	30.34	770.6	0	—17.8	69	Calm	0	0	.....	8ck	0	W	.....	0	0	Fair	
Erie, Pa.	.....	.....	29.88	758.9	26	— 3.3	88	Calm	0	0	.....	.....	10n	.....	.....	Inap.	Inap.	Light snow	
Escanaba, Mich.	.....	.....	30.04	763.0	7	—13.9	77	N	19	8.5	.....	.....	10s	.....	N	0.03	0.8	Cloudy	
Fort Gibson, Indian Ter.	.....	.....	29.45	748.0	48	8.9	85	S	13	5.8	.....	0	5s	.....	SW	Inap.	Inap.	Fair	
Ft. St. Michael, Alaska.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Fort Sill, Indian Ter.	28.48	723.4	29.64	752.8	20	— 6.7	39	NW	18	8.0	.....	2c	0	W	.....	0	0	Fair	
Fort Sully, Dakota.	28.56	725.4	30.50	774.7	—12	—24.4	75	NW	28	12.5	.....	0	0	.....	.....	0	0	Clear	
Florence, Arizona.	28.34	719.8	29.88	758.9	48	8.9	.....	SW	.....	.....	.....	10k	0	SW	.....	0.10	2.5	Cloudy	
Galveston, Tex.	.....	.....	29.80	756.9	57	13.9	100	SE	4	1.8	.....	.....	Fog	.....	.....	0.03	0.8	Foggy	
Grand Haven, Mich.	.....	.....	29.88	758.9	14	—10.0	81	NE	11	4.9	.....	.....	10s	.....	.....	Inap.	Inap.	Cloudy	
Indianapolis, Ind.	.....	.....	29.74	755.4	34	1.1	79	SE	2	0.9	.....	.....	10s,sm'	.....	.....	0.20	5.1	Threatening	
Indianola, Tex.	.....	.....	29.80	756.9	61	16.6	100	N	12	5.4	.....	.....	10s	.....	.....	0.10	2.5	Cloudy	
Jacksonville, Fla.	.....	.....	30.08	764.0	62	16.7	94	Calm	0	0	.....	0	Fog	.....	.....	0	0	Foggy	
Keokuk, Iowa.	.....	.....	29.61	752.1	28	— 2.2	100	NE	8	3.6	.....	.....	10n	.....	NE	0.06	1.5	Sleeting	
Key West, Fla.	.....	.....	30.00	762.5	70	21.1	90	NE	8	3.6	.....	0	0	.....	.....	0	0	Clear	
Kittyhawk, N. C.	.....	.....	30.03	762.7	44	6.7	100	Calm	0	0	.....	.....	Fog	.....	.....	0.78	19.8	Foggy	
Knoxville, Tenn.	.....	.....	29.85	758.2	40	4.4	91	N	2	0.9	.....	.....	10s	.....	.....	0.56	14.2	Cloudy	
La Crosse, Wis.	.....	.....	29.92	760.0	10	—12.2	79	S	2	0.9	.....	.....	10s	.....	.....	0	0	Cloudy	
Leavenworth, Kan.	.....	.....	29.47	748.5	32	0.0	100	N	6	2.7	.....	.....	10s	.....	.....	0.01	0.3	Foggy	
Louisville, Ky.	.....	.....	29.71	754.6	36	2.2	90	SE	2	0.9	.....	.....	Fog	.....	.....	0.63	16.0	Light rain	
Lynchburg, Va.	.....	.....	30.04	763.0	34	1.1	95	Calm	0	0	.....	.....	Fog	.....	.....	0.37	9.4	Foggy	
Malone, N. Y.	.....	.....	30.12	765.0	6	—14.4	88	Calm	0	0	.....	.....	10s	.....	.....	0	0	Cloudy	
Marquette, Mich.	.....	.....	30.08	764.3	7	—13.9	77	NW	8	3.6	.....	.....	10s	.....	.....	0	0	Cloudy	
Memphis, Tenn.	.....	.....	29.99	761.4	60	15.6	94	S	12	5.4	.....	.....	10n	.....	S	0.72	18.3	Light rain	
Milwaukee, Wis.	.....	.....	29.88	758.9	18	— 7.8	84	N	12	5.4	.....	.....	10s	.....	.....	0	0	Cloudy	
Mobile, Ala.	.....	.....	29.92	760.0	58	14.4	100	S	9	4.0	.....	.....	Fog	.....	.....	0.04	1.0	Dense fog	
Montgomery, Ala.	.....	.....	29.92	760.0	61.5	16.4	94	S	10	4.5	.....	.....	10s	.....	S	0.24	6.1	Threatening	
Morgantown, W. Va.	28.75	730.2	29.83	757.7	32	0.0	89	Calm	0	0	.....	.....	10s	.....	W	0.24	6.1	Threatening	
Mt. Washington, N. H.	23.44	595.4	29.80	756.9	— 2	—18.9	100	NW	50	22.4	.....	.....	Fog	.....	.....	0	0	Foggy	
Nashville, Tenn.	.....	.....	29.68	753.9	54	12.2	100	Calm	0	0	.....	.....	10ks	.....	S	1.02	25.9	Cloudy	
New Haven, Conn.	.....	.....	30.31	769.9	20	— 6.7	80	NE	6	2.7	.....	.....	10n,fg	.....	.....	Inap.	Inap.	Light snow	
New London, Conn.	.....	.....	30.24	768.1	20	— 6.7	85	NE	6	2.7	.....	.....	10s	.....	.....	0	0	Cloudy	
New Orleans, La.	.....	.....	29.85	758.2	67	19.4	90	S	10	4.5	.....	.....	9s	.....	S	0	0	Cloudy	
Newport, R. I.	.....	.....	30.25	768.3	20	— 6.7	72	E	4	1.8	.....	.....	10ks	.....	SE	0	0	Threatening	
New York, N. Y.	.....	.....	30.19	766.8	23	— 5.0	86	NE	11	4.9	.....	.....	10n,fg	.....	.....	0.03	0.8	Light snow	
Norfolk, Va.	.....	.....	30.01	762.2	43	6.1	96	NE	2	0.9	.....	.....	Fog	.....	.....	0.57	14.5	Light rain	
North Platte, Neb.	26.95	684.5	29.83	757.7	— 8	—22.2	100	N	48	21.5	.....	.....	10n	.....	.....	Inap	Inap.	Light snow	
Omaha, Neb.	28.59	726.2	29.72	754.9	15	— 9.4	82	N	24	10.7	.....	.....	10n	.....	.....	0.05	1.3	Heavy snow	
Oswego, N. Y.	.....	.....	30.04	763.0	17	— 8.3	92	SE	10	4.5	.....	.....	10s	.....	.....	0	0	Threatening	
Pembina, Dakota.	.....	.....	30.56	776.2	—53	—47.2	.....	NW	3	1.3	.....	0	0	.....	.....	0.01	0.3	Clear	
Philadelphia, Pa.	.....	.....	30.14	765.5	27	— 2.8	94	E	6	2.7	.....	.....	10n	.....	E	0.15	3.8	Light snow	
Pike's Peak, Col.	17.23	437.6	29.44	747.8	— 3	—19.4	83	NW	7	3.1	.....	5ck	5ks	.....	.....	0.08	2.0	Cloudy	
Pittsburgh, Pa.	.....	.....	29.82	757.4	30	— 1.1	89	E	2	0.9	.....	.....	10n	.....	.....	0.25	6.3	Light rain	
Port Huron, Mich.	.....	.....	29.89	759.2	14	—10.0	81	NE	4	1.8	.....	0	10s,sm	.....	SW	0.01	0.3	Smoky	
Portland, Me.	.....	.....	30.29	769.4	8	—13.3	78	N	4	1.8	.....	.....	10s,sm'	.....	.....	0	0	Cloudy	
Portland, Oregon.	.....	.....	30.16	766.1	39	3.9	90	E	2	0.9	.....	.....	10s	.....	.....	0.27	6.9	Cloudy	
Punta Rassa, Fla.	.....	.....	30.06	763.5	68 0	20.0	94	E	10	4.5	.....	0	0	.....	.....	0	0	Clear	
Rochester, N. Y.	.....	.....	29.96	761.0	16	— 8.9	75	SE	6	2.7	.....	.....	10s	.....	.....	0.08	2.0	Cloudy	
Salt Lake City, Utah.	25.49	647.4	29.82	757.4	24	— 4.4	87	SE	4	1.8	.....	.....	10n	.....	.....	0.06	1.5	Light snow	
Sandy Hook, N. J.	.....	.....	30.13	765.3	31	— 0.6	89	Calm	0	0	.....	.....	10n	.....	.....	0.10	2.5	Heavy snow	
San Diego, Cal.	.....	.....	29.90	759.4	54	12.2	68	W	28	12.5	.....	.....	10s	.....	W	0.12	3.0	Cloudy	
San Francisco, Cal.	.....	.....	30.14	765.5	44	6.7	71	NW	2	0.9	.....	0	0	.....	.....	0	0	Clear	
Santa Fé, N. M.	22.43	569.7	28.97	735.8	22	— 5.6	58	W	6	2.7	.....	0	5s	.....	.....	0.09	2.3	Fair	
Savannah, Ga.	.....	.....	30.05	763.3	62	16.7	88	SW	7	3.1	.....	2c	2s	W	SW	0	0	Fair	
Shreveport, La.	.....	.....	29.75	755.6	61	16.1	100	SW	8	3.6	.....	.....	10n	.....	.....	0.23	5.8	Light rain	
Smithville, N. C.	.....	.....	30.05	763.3	52	11.1	93	S	3	1.3	.....	.....	Fog	.....	.....	0	0	Foggy	
Springfield, Mass.	.....	.....	30.24	768.1	15.5	— 9.2	81	Calm	0	0	.....	.....	10s	.....	.....	0	0	Cloudy	
St. Louis, Mo.	.....	.....	29.59	751.6	35	1.7	90	SE	4	1.8	.....	.....	10n	.....	.....	0.07	1.8	Light rain	
St. Marks, Fla.	.....	.....	30.04	763.0	57	13.9	100	S	8	3.6	.....	.....	Fog	.....	.....	0.02	0.5	Foggy	
St. Paul, Minn.	.....	.....	30.03	762.7	4	—15.6	74	N	12	5.4	.....	.....	10s	.....	.....	0.01	0.3	Cloudy	
St. Paul's Island, Alaska.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Thatcher's Island, Mass.	.....	.....	30.26	768.6	21	— 6.1	57	Calm	0	0	.....	.....	10s	.....	W	0	0	Cloudy	
Toledo, Ohio.	.....	.....	29.80	756.9	26	— 3.3	82	E	6	2.7	.....	.....	10n	.....	E	0.03	0.8	Light snow	
Tucson, Arizona.	27.49	698.2	30.04	763.0	35	1.7	.....	SE	.....	.....	.....	.....	10ks	.....	W	0.02	0.5	Cloudy	
Tybee Island, Ga.	.....	.....	30.04	763.0	53	11.7	100	SW	8	3.6	.....	2c	Fog	W	.....	0	0	Foggy	
Vicksburg, Miss.	.....	.....	29.82	757.4	64	17.8	97	S	12	5.4	.....	.....	10s,n	.....	S	0.13	0.8	Threatening	
Virginia City, M. T.	24.12	612.6	29.60	751.8	— 3	—19.4	.....	Calm	0	0	.....	0	1n	.....	.....	0.04	1.0	Light snow	
Washington, D. C.	.....	.....	30.08	764.0	31	— 0.6	100	E	2	0.9	.....	.....	10n	.....	SE	0.21	5.3	Light rain	
Wilmington, N. C.	.....	.....	30.04	763.0	50	10.0	100	SE	4	1.8	.....	.....	Fog	.....	.....	0.04	1.0	Foggy	

UNITED STATES SERIES.—Continued.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Upp'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Wood's Holl, Mass.	.....	.....	30.27	768.8	24	— 4.4	74	SE.	8	3.6	.....	.....	10s	.....	.....	0	0	Threatening	
Yankton, Dakota	28.72	729.5	30.18	766.6	— 5	—20.6	81	NW	24	10.7	.....	.....	10n	.....	.....	0.05	1.3	Light snow.	
Yuma, Arizona	.....	.....	29.97	761.2	50	10.0	.....	N	.....	.....	.....	.....	10n	.....	N	Inap.	Inap.	Light rain	
Sub-Series.																			
Kingston, Jamaica, W. I.	.....	.....	30.20	767.1	75	23.9	76	Calm	0	0	.....	0	2s	.....	E	0	0	.....	James Gall.
Navassa, W. I.	.....	.....	.....	.....	79	26.1	.....	NE	.....	.....	1	.....	.....	.....	.....	0	0	Clear	F. M. Everett.
Clifton, Ja., W. I.	27.29	693.2	30.10	764.5	66	18.9	78	E	1.0	0.4	.....	5s	2k	E	.....	0	0	Fine	C. Partridge.
Paramaribo, D. Guiana, S. A.	.....	.....	30.02	762.5	79	26.1	82	E	.....	.....	2	5k	6ks	E	.....	0.100	2.54	½ cloudy	C. J. Hering.
Batavia, Dutch Guiana, S. A.	30.08	764.0	.....	.....	76 1	24.5	.....	E	.....	.....	.....	.....	.....	.....	.....	0.305	7.75	Rainy	Dr. H. Groot.
Medellin, Colombia, S. A.	25.20	640.1	.....	.....	66.5	19.2	80	Calm	.....	.....	0	0	1ks	.....	.....	0	0	Fair	Thomas Herran.
York Factory, B. A.	.....	.....	29.90	759.4	—36 0	—37.8	.....	N	7	3.1	.....	0	2s	.....	SW	0	0	Fair	J. Fortescue, W. Wood.
Honolulu, Oahu, H. I.	.....	.....	30.00	762.0	72	22.2	95	ESE	.....	.....	3	.....	.....	.....	.....	0	0	Clear	Daniel Smith.
Makawao, Maui, H. I.	.....	.....	29.91	759.7	67	19.4	84	E	.....	.....	1	0	2k	.....	.....	.....	.....	Raining	F. L. Clarke.

Note.—The originals give the amount of cloudiness by the scale 0 to 4, except York Factory, Makawao, Medellin and Paramaribo. The elevation of the barometer at Bismarck is 1,677 feet, or 511.1 meters; Cheyenne, 6,057.3 ft., or 1,846.2 m.; Clifton, about 2,892 ft. or 881.5 m.; Denver, 5,135 ft., or 1,565.2 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Florence, 1,550 (?) ft., or 472.5 (?) m.; Makawao, 2,205 ft., or 672.1 m.; Morgantown, 1,027.2 ft., or 313.3 m.; Medellin, 4,876 ft., or 1,486.2 m.; Mt. Washington, 6,285 ft., or 1,915.6 m.; North Platte, 2,846 ft., or 867.4 m.; Omaha, 1,054.6 ft., or 321.4 m.; Pike's Peak, 14,150.7 ft., or 4,313.1 m.; Salt Lake City, 4,362.2 ft., or 1,329.6 m.; Santa Fe, 6,862.2 (?) ft., or 2,091.6 (?) m.; Tucson, 2,553 (?) ft., or 772.1 (?) m.; Virginia City, 5,480 (?) ft., or 1,670.3 (?) m.; Yankton, 1,278 ft., or 389.5 m. The following constants are added in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Denver, 5.22 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fe, 6.54 in.; Tucson, 2.50 in.; Virginia City, 5.48 in. The elevation of Batavia is about 6 feet; the barometric readings need the addition of 0.2 mm. or 0.01 in. for reduction to sea-level.

UNITED STATES NAVAL SERIES.

By authority of the **SECRETARY OF THE NAVY.**

Furnished by the coöperation of the Navy Department, through Commodore Daniel Ammen, U. S. N., Chief of Bureau of Navigation.

STATIONS AND VESSELS.	True course toward—	Hourly rate in knots.	*Barometer as reported.		Temperature of the Air.		Relative Humidity.	Wind.				Clouds.				Rain-fall or melted snow in the past 24 hours.		State of Ocean.	Direction of swell from—	Weather.	Observer.
								Direction.	Velocity		Force.	Amount.		Direction.							
												Up'er	Low'r	Up'er	Low'r						
			Inches.	Millimeters.	Fahrenheit.	Centigrade.	Per cent.	From—	Miles per hour.	Meters per second.	0—10.	0—10.	0—10.	From—	From—	Inches.	Millimeters.				
Naval Academy, Annapolis, Md.			29.69	754.1	33	0.6	80	NE			1		10			0.40	10.2			Raining	
Naval Hospital, Annapolis, Md.			30.10	764.5	31	— 0.6	100	NE			1		9		NE	0.40	10.2			Rain & snow	
Navy Yard, Norfolk, Va.			30.14†	765.5†	43	6.1		Calm			0		10n							Raining	
Navy Yard, Pensacola, Fla.			30.05	763.3	63	17.2		SSE			1		10							Foggy	
Navy Yard, Portsmouth, N.H.			30.24	768.1	5	—15.0		NW			2									Cloudy	
Navy Yard, Wash'gton, D. C.			30.11	764.8	33	0.6		E			2									Sleeting	
Adams, Port Royal, S. C.			30.09	764.3	54	12.2	100	S			1–2									Foggy	
Ajax, Port Royal, S. C.			30.03	763.5	53	11.7		SSE			2		10							Dense fog	
Alarm, New York, N. Y.			29.13†	739.9†	23	— 5.0		NE			2		10							Snowing	
Canonicus, New Orleans, La.			29.65†	753.1†	63	17.2		S			4									Foggy	
Catskill, Port Royal, S. C.			30.00†	762.0†	51	10.6		S			2							Smooth		Foggy	
Colorado, New York, N. Y.			30.26	768.6	24	— 4.4		NE			2		10			0.031	0.79			Snowing	
Despatch, Washington, D. C.			30.10†	766.1†	31	— 0.6		E			1		10							Rainy	
Dictator, Port Royal, S. C.			30.10	764.5	51	10.6	100	S			3		Fog							Damp	
Essex, Hampton Roads, Va.			30.03	762.7	42	5.6	91	N			2		10							Raining	
Franklin, New York, N. Y.			30.25	768.3	24.5	— 4.2	100	NE			2		10					Smooth		Snowing	
Hartford, Hampton Roads, Va.			30.19	766.8	39	3.9		NNE			2		10			0.50	12.7			Rainy	
Huron, Port Royal, S. C.			30.15	765.8	55	12.8	93	S			1									Foggy	
Intrepid, New York, N. Y.			30.20	767.1	24	— 4.4		NE			1		10							Snowing	
Manhattan, Port Royal, S. C.			30.04†	763.0‡	51	10.6		S			2							Smooth		Dense fog	
Michigan, Erie, Pa.			29.88	758.9	26	— 3.3	88	SE			2		10							Light snow	
Minnesota, New York, N. Y.			30.26	769.1	25	— 3.9	87	NE			3		10							Snowing	
Monongahela, Baltimore, Md.			30.06	763.5	32	0.0		ENE			1		10							Raining	
New Hampshire, Port Royal, S. C.			30.25	768.3	56	13.3		S			2		4		S			Smooth		Foggy	
Ossipee, New Orleans, La.			29.99	761.7	65	18.3		SSE			2		9		N					Foggy	
Santee, Annapolis, Md.			29.88†	758.9†	34	1.1	100	NE			1		10							Raining	
St. Louis, League Island, Pa.			29.97	761.2	28.5	— 1.9		N			3		10		NE	0.10	2.5			Snowing	
Swatara, New York, N. Y.			30.30	769.6	22	— 5.6		NE			3		10n							Snowing	
Tallapoosa, Washington, D. C.			29.97	761.2	32	0.0		ENE			1		10							‡D. clouds	
Wabash, Boston, Mass.			30.34	770.6	9	—12.8		NW			2		10		SE					Misty	
Wyoming, Washington, D. C.			30.03‡	775.4†	32	0.0		Calm			0		10							Raining	

* It is not known that the barometer is corrected for temperature, instrumental error or elevation. † Aneroid Barometer. ‡ Detached clouds.

UNITED STATES MARINE SERIES

REPORTED TO THE OFFICE OF THE CHIEF SIGNAL OFFICER OF THE ARMY.

NAMES OF VESSELS.	True course toward—	Hourly rate in knots.	Barometer reduced to sea-level.		Temperature of the Air.		Relative Humidity.	Wind.				Clouds.				State of Ocean.	Direction of swell from—	Weather.	OBSERVER.
								Direction.	Velocity.		Force.	Amount.		Direction.					
												Up'er	Low'r	Upper.	Lower.				
			Inches.	Millimeters.	Fahrenheit.	Centigrade.	Per cent.	From—	Miles per hour.	Meters per second.	0—10.	0—10.	0—10.	From—	From—				

PACIFIC MAIL S. S. CO. MARINE SERIES.

Furnished by the coöperation of ————, President; Williams, Blanchard & Co., Agents.

OCCIDENTAL AND ORIENTAL S. S. CO. MARINE SERIES.

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NORTH GERMAN LLOYD OF BREMEN MARINE SERIES.

Furnished by the coöperation of A. Schumacher & Co., Agents.

Steamer Nürnberg, N. 50°, 6′, W. 21°, 30′	W	.....	29.82	757.4	52.2	11.2	.....	Var.	.....	.....	5–6	.....	..ck	.....	SSW	High swell	W	Detached clouds.	Capt. A. Jaeger.

MARINE SERIES. (Miscellaneous.)

Furnished by the coöperation of Captain James Jorgensen.

Schooner Addie Fuller, N. 36°, 22′, W. 74°, 36′	S	3	29.96	761.0	56	13.3	100	E	10	4.5	.....	.....	10n	.....	SE	Short sea	.....	Raining.....	Capt. James Jorgensen.

NOTE.—The schooner Addie Fuller gives the amount of cloudiness by the scale 0 to 4.

COLLATED AT THE OFFICE OF THE CHIEF SIGNAL OFFICER OF THE ARMY, WASHINGTON, D. C.

The records which appear in this Bulletin are copied from the regular exchanges of this office, made in each instance in compliance with an especial request and are published for the uses of the coöperating observers. The barometric readings in the first two columns are reduced to freezing and their respective standards; those in the second two also to mean sea-level. The "weather" is generally published as given.

When the distinction between the upper and lower strata of clouds is not reported, the *kinds* or *types*, viz: cirrus, cumulus, stratus, nimbus, scud, fracto, pallio, haze, fog and smoke, as indicated, respectively, by the letters c, k, s, n, d, f, p, hz., fg. and sm'e, are generally published with the amount in the lower-cloud column. The distinction between the upper and lower strata is carefully made in the United States Series and a portion of the Canadian Series, and the types are indicated by the above letters or their combinations in the proper column.

Albert J. Myer

Brig. Gen. (Bvt. Asst.) Chief Signal Officer, U. S. A.

BULLETIN

OF

INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON JANUARY 16, 1877.

7:35 A. M. WASHINGTON mean time.

6:7 A. M. MEXICO mean time.
7:7 A. M. SAN JOSE mean time.
0:6 P. M. LISBON mean time.
0:28 P. M. MADRID mean time.
0:43 P. M. GREENWICH mean time.
0:53 P. M. PARIS mean time.
1:1 P. M. BRUSSELS mean time.
1:4 P. M. UTRECHT mean time.
1:18 P. M. BERNE mean time.

1:26 P. M. CHRISTIANIA mean time.
1:33 P. M. COPENHAGEN mean time.
1:33 P. M. ROME mean time.
1:37 P. M. BERLIN mean time.
1:49 P. M. VIENNA mean time.
1:55 P. M. STOCKHOLM mean time.
2:18 P. M. ATHENS mean time.
2:39 P. M. CONSTANTINOPLE mean time.
2:44 P. M. ST. PETERSBURG mean time.

ALGERIAN SERIES.

Furnished by the coöperation of General d'Eudeville, Commandant Supérieur du Génie in Algeria.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Nemours			30.32	770.0	60.6	15.9	68	Calm			0		8			0	0	Cloudy	Charnot.
Algiers			30.28	769.1	52.9	11.6		SW			2		8			Inap.	Inap.	Cloudy	Peter.
La Calle			30.02	762.4	54.3	12.4	74	NW			4		8			0.787	20.0	Cloudy	Fleury.
Tunis			30.01	762.2	53.6	12.0		NW			4		7			0	0	Cloudy	Jacques.
Sfax																			
Saida			30.27	768 8	41.2	5.1	90	N			1		7			0.315	8.0	Cloudy	Millot.
Tebessa			30.05	763.3	33.8	1.0		NW			3		10			0.118	3.0	Hidden	Bourgeois.
Geriville			30.29	769.4	41.0	5.0	14	N			2		0			0	0	Clear	Lemaillot.
Laghouat			30.18	766.5	50.0	10.0	60	W			1		2			0	0	Clear	Guyot.
Biskra			30.09	764.2	58.1	14 5	65	NW			2		8			0	0	Cloudy	Kuntz.

NOTE.—In the originals the distinction between the amount of upper and lower clouds is apparently not made. The weather is published as given. The rain-fall is measured at 7 a. m., local time.

AUSTRIAN SERIES.

Furnished by the cooperation of Professor Ferdinand Osnaghi, Director of the Imperial and Royal Central Meteorological Institute at Vienna.

Agram			30.18	766,5	42.8	6.0	72	NE			2		10			0	0		Prof. Ivan Stoxir.
Cracow, I. R. Observatory			30.30	769.6	29.1	— 1.6	96	NE			2		10			0.012	0.3		Dr. Wierzbiski.
Eperies			30.16	766.1	33.1	0.6	89	N			2		6s			0	0		Julius Mikolik.
Gratz	28 90	734.1	30.21	767.2	37 6	3.1	81	SSW			2		9			0	0		Andreas Rospini.
Hermannstadt	28.63	727 2	30.10	764.6	36.7	2.6	84	E			1		10			0	0		Prof. Reissenberger.
Kremsmünster	28.93	734.7	30.34	770.5	34.5	1.4	93	W			2		10			0.295	7.5		Prof. C. Wagner.
Lemberg			30.24	768.1	23.9	— 4.5	95	NE			2		9			0	0		Dr. T. Stanecki.
Nyiregyhaza																			Habzsuda Daniel.
Pola			30.08	764.1	50.2	10.1	51	NE			4		10ks			0	0		I.R.Hydrographic Office.
Szegedin			30.15	765.8	36.0	2.2	85	S			2		10			0.152	3.85		Karl Stancel.
Trieste			30.16	766.0	49.8	9.9	49	ENE			2		10			0	0	Cloudy	Prof. V. Farolfi.
Vienna			30.25	768.4	38.8	3.8	88	WNW			3		10			0.051	1.3	Raining	I. R. Central Met. Obs'y.

NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 7 p. m., local time. The elevation of Gratz is 343.5 meters, or 1,126.9 feet; Hermannstadt, 407.8 meters, or 1,337.9 feet; Kremsmünster, 383.6 meters, or 1,258.5 feet.

BELGIAN SERIES.

Furnished by the cooperation of J. C. Houzeau, Director of the Royal Observatory at Brussels.

Arlon			30.39	771.8	36.1	2.3	92	NW			2		10			0	0		Royal Observatory.
Brussels			30.25	768.3	43 3	6.3	79	SSW			3	..cs	0			0	0	Partly cl'dy	
Furnes																			
Maeseyck			30.25	768.4	42.1	5.6	81	SSW			3		0			0	0		

NOTE.—In the originals, the weather is occasionally given in general notes.

BRITISH SERIES

Furnished by the coöperation of Robert H. Scott, Esq., Director of the Meteorological Office, London, Alexander Buchan, Secretary of the Scottish Meteorological Society, Edinburgh, and the respective Observers.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Aberdeen	.....	.....	29.69	754.1	43.7	6.5	.....	S	15	6.7	.....	.....	9	.....	.....	0.010	0.25	Overcast.....	William Boswell.
Ardrossan	.....	.....	29.66	753.4	43	6.1	.....	S	.....	.....	4	.....	9	.....	.....	.....	.....	Raining.....	William McNeil.
Armagh, Observatory	.....	.....	29.66	753.4	50.2	10.1	.....	SSW	21	9.4	.....	.....	.....	.....	.....	.....	.....	.....	S. Call, for Dr. Robinson.
Birr Castle, (Parsonstown)	.....	.....	29.72	754.9	53.0	11.7	.....	S	.....	.....	2	.....	10	.....	.....	.....	.....	Raining.....	J. Dreyer.
Bradford	.....	.....	29.87	758.7	46.2	7.9	.....	SW	.....	.....	2	.....	10	.....	.....	0.26	6.6	Overcast.....	J. McLandsborough.
Bridgetown, (Barbados)	.....	.....	30.02	762.5	82.0	27.8	.....	NE	.....	.....	2	.....	7	.....	.....	.....	.....	Overcast.....	Sergt. J. F. Halanen, A.
Cambridge, Observatory	.....	.....	30.03	762.7	50.5	10.3	.....	SSW	.....	.....	2	.....	7	.....	.....	.....	.....	Drizzling.....	H. Todd. [H.C.
Cardington	.....	.....	30.03	762.7	49.4	9.4	.....	SW	.....	.....	1	.....	9	.....	.....	.....	.....	Overcast.....	John McLaren.
Carlisle	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	T. Bell, for J. Cartmell.
Chatham, School M. E	.....	.....	30.12	765.0	49.2	9.6	.....	SW	.....	.....	2	.....	4	.....	.....	.....	.....	Drizzling.....	Maj. C. N. Martin, R.E.
Dartmoor	28.55	725.2	30.08	764.0	47.6	8.7	.....	SW	.....	.....	4	.....	10	.....	.....	.....	.....	Rain & fog..	R. E. Power.
Davos Platz, (Switzerland)	24.96	634.0	.....	.....	24.2	— 4.3	78	SE	.....	.....	1	.....	10	.....	.....	0.099	2.51	Overcast.....	Francis Redford, M. A.
Donaghadee	.....	.....	29.69	754.1	47	8.3	.....	SW	.....	.....	3	.....	10	.....	.....	.....	.....	Overcast.....	J. Mac Gowan.
Dover	.....	.....	30.12	765.0	48	8.9	.....	SW	.....	.....	4	.....	8	.....	.....	.....	.....	Drizzling.....	J. Costello.
Eccles, (near Manchester)	.....	.....	29.90	759.4	46.7	8.2	.....	S	8.4	3.8	.....	.....	10	.....	.....	.....	.....	Misty.....	Thomas Mackereth.
Falmouth, Observatory	.....	.....	30.04	763.0	51.7	10.9	.....	SW	.....	.....	4	.....	10	.....	.....	.....	.....	Rain and fog	The Staff.
Fort Napier, (Natal)	27.65	702.3	29.89	759.2	65.3	18.5	.....	E	.....	.....	1	.....	10	.....	.....	.....	.....	Drizzling.....	P'vt. G. Salmon, A. H. C
Free Town, (Sierra Leone)	.....	.....	29.91	759.7	84.0	28.9	.....	Calm	.....	.....	0	.....	2	.....	.....	.....	.....	*D. clouds.....	
Galway, Queen's College	.....	.....	29.64	752.8	45	7.2	.....	W	.....	.....	4	.....	10	.....	.....	.....	.....	Gloomy.....	Prof. A. H. Curtis.
Gibraltar, (Mediterranean)	.....	.....	30.30	769.6	59.3	15.2	.....	W	.....	.....	2	.....	0	.....	.....	.....	.....	Blue sky.. ..	Corpl. C. Aitken, A.H.C.
Glasgow, Observatory	.....	.....	29.66	753.4	46.0	7.8	.....	S	.....	.....	2	.....	10	.....	.....	.....	.....	Raining.....	Lewis Stuart.
Great Yarmouth	.....	.....	30.07	763.8	48	8.9	.....	SSW	.....	.....	4	.....	5	.....	.....	.....	.....	Misty.....	G. T. Watson.
Greenwich, Royal Obs'y	.....	.....	30.08	764.0	50.4	10.2	.....	SW	.....	.....	4	.....	9	.....	.....	.....	.....	*D. clouds.....	The Staff, for G. B. Airy.
Guernsey	.....	.....	30.13	765.3	51	10.6	.....	SSW	.....	.....	3	.....	8	.....	.....	.....	.....	Showery.....	Dr. S. F. Hoskins.
Helston. ..	.....	.....	30.04	763.0	52	11.1	.....	SW	.....	.....	4	.....	10n	.....	.....	0.8	20.3	Misty.....	M. P. Moyle.
Holyhead	.....	.....	29.81	757.2	49	9.4	.....	SSW	.....	.....	4	.....	10	.....	.....	.....	.....	Raining.....	John Tilston.
Kew, Observatory	.....	.....	30.08	764.0	50.6	10.3	.....	SW	17	7.6	.....	.....	8	.....	.....	.....	.....	*D. clouds.....	The Staff.
Kingstown	.....	.....	29.76	755.9	53	11.7	.....	S	.....	.....	4	.....	10	.....	.....	.....	.....	Overcast.....	George Mitchell.
Leicester Museum	.....	.....	29.97	761.2	47.7	8.7	.....	SW	.....	.....	1	.....	9	.....	.....	.....	.....	*D. clouds.....	Wm. J. Harrison, F.G.S.
Malta, (Mediterranean)	.....	.....	29.88	758.9	55.6	13.1	.....	NW	.....	.....	4	.....	6k	.....	.....	.....	.....	*D. clouds.....	Corp'l. P. Bravis, A.H.C.
Nairn	.....	.....	29.51	749.5	45	7.2	.....	E	.....	.....	1	.....	10	.....	.....	.....	.....	Overcast.....	W. D. Penny.
Nassau, (Bahamas)	.....	.....	30.13	765.3	73.0	22.8	.....	SE	.....	.....	0	.....	8	.....	.....	.....	.....	Drizzling.....	Surg. Maj. Henry.
Nottingham, Observatory	.....	.....	29.96	761.0	47.6	8.7	.....	S	.....	.....	3	.....	10d	.....	S	0.024	0.61	Raining.....	E. J. Lowe, F. R. S.
Oscott, St. Mary's College	.....	.....	29.97	761.2	45.0	7.2	.....	S	.....	.....	4	.....	10	.....	.....	.....	.....	Foggy	Rev. Stephen Whitty.
Oxford, Radcliffe Obs'y	.....	.....	30.03	762.7	50	10.0	.....	SW	.....	.....	1	.....	8	.....	.....	.....	.....	Overcast.....	J. Lucas.
Plymouth	.....	.....	30.05	763.3	50.2	10.1	.....	SW	.....	.....	2	.....	4	.....	.....	.....	.....	Drizzling.....	John Merrifield.
Roche's Point	.....	.....	29.80	756.9	52	11.1	.....	SW	.....	.....	5	.....	10	.....	.....	.....	.....	Overcast.....	W. Kennedy.
Saint Ann's Head	.....	.....	29.91	759.7	50	10.0	.....	SSW	.....	.....	4	.....	10	.....	.....	.....	.....	Foggy	John C. Walker.
Saint Heller, (Jersey)	.....	.....	30.16	766.1	51.0	10.6	.....	S	.....	.....	4	.....	8	.....	.....	.....	.....	¾ clouded..	A. P. Amy.
Sandwick Manse, (Orkneys)	.....	.....	29.48	748.8	41.2	5.1	.....	SSE	35	15.6	.....	.....	10	.....	.....	.....	.....	Raining.....	Rev. C. Clouston, LL. D.
Scarborough	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	F. Shaw.
Scutari Cemetery, (Turkey)	.....	.....	30.00	762.0	46.2	7.9	.....	NNE	.....	.....	3	.....	10	.....	.....	.....	.....	Drizzling.....	Sergt. W. H. Lyne.
Sheffield	.....	.....	29.62	752.3	47.4	8.6	.....	S	.....	.....	3	.....	10	.....	.....	0.149	3.64	Overcast.....	W. F. Cooper.
Silloth Rectory	.....	.....	29.75	755.6	47.6	8.7	93	SW	.....	.....	5	.....	8	.....	.....	0.815	20.70	*D. clouds.....	Rev. Francis Redford
Stonyhurst, Observatory	.....	.....	29.88	758.9	46.0	7.8	.....	S	.....	.....	2	.....	10s	.....	.....	.....	.....	Misty.....	Rev. S. J. Perry.
Stornoway, Lews C., (Hebr.)	.....	.....	29.37	746.0	47	8.3	.....	SSW	.....	.....	8	.....	10	.....	.....	.....	.....	Raining.....	John Smith.
Stratfield Turgiss	.....	.....	30.10	764.5	50.3	10.2	.....	SW	.....	.....	1	.....	8	.....	.....	.....	.....	Overcast.....	Rev. Charles H. Griffith.
Thurso	.....	.....	29.49	749.0	43	6.1	.....	S	.....	.....	5	.....	10	.....	.....	.....	.....	Raining.....	John Trotter.
Truro, Royal Institution	.....	.....	30.05	763.3	53	11.7	.....	SW	.....	.....	4	.....	10	.....	.....	.....	.....	Raining.....	W. Newcombe.
Valencia, Observatory	.....	.....	29.75	755.6	52.9	11.6	.....	SW	35	15.6	.....	.....	10	.....	.....	.....	.....	*D. clouds.....	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man)	.....	.....	.....	.....	45	7.2	.....	SW	.....	.....	7	.....	10	.....	.....	0.20	5.1	.....	Henry Mercer.
Cape Good Hope, Obs'y	.....	.....	30.06	763.5	80.5	26.9	50	SSE	27	12.1	.....	0	1	.....	.....	.....	.....	.....	The Staff, for E. J. Stone.
Hobart Town, (Tasmania)	.....	.....	29.52	749.8	72.0	22.2	88	S	.....	.....	1	.....	10kn	.....	.....	0	0	Cloudy	Francis Abbott, F.R.A.S.
Leith, Restalrig Park	.....	.....	29.69	754.1	48.9	9.4	.....	SW	.....	.....	4	.....	7k	.....	.....	0.05	1.3	Fine.....	Andrew Gibb.
Mauritius, Observatory	.....	.....	30.00	762.0	84.9	29.4	61	N	15.4	6.9	.....	2	6	SSE	NNW	0.06	1.5	*D. clouds.....	C. Meldrum.
Melbourne, Observatory	.....	.....	29.72	754.9	63.3	17.4	88	SSW	10	4.5	.....	.....	10	.....	.....	0	0	Dull	R. L. J. Ellery.
Monach L't-house, (Hebrides)	.....	.....	29.38	746.2	48	8.9	.....	SSW	.....	.....	6	.....	10	.....	.....	0.3	7.6	.....	J. Young clause.
North Unst, (Shetland Is.)	.....	.....	29.55	750.6	42	5.6	.....	S	.....	.....	7	10	10	S	.....	Blank	lank	.....	Robert Burnet.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

NOTE.—Generally, the originals do not give the relative humidity, rain-fall, or distinction between upper and lower clouds. The originals give the wind direction to 32 points and weather by the Beaufort notation. The originals give the barometer for Aberdeen, Cardington, Galway, Oxford, St. Helier, Sandwick, Scarborough, Stonyhurst, Leith, Monach and North Unst as read off and the cloudiness for Stornoway by the scale 0 to 4. The wind-force is given by the scale 0 to 12 in the official series; 0 to 6 in the sub-series; except in lbs. per square foot for Greenwich and Hobart Town. The rain-fall is measured at Aberdeen at 10 a. m.; Bradford, 9 a. m.; Hobart Town, 7:30 a. m.; Nottingham, 6 p. m.; Mauritius, 9 a. m., local time. The elevation of Dartmoor is 1,400 feet, or 426.7 meters; Davos Platz, 5,105? feet, or 1,556.6? meters; Fort Napier, 2,200 feet, or 670.6 meters. *Detached clouds.

COSTA RICA SERIES.

By authority of the Minister of Foreign Affairs.

Furnished by the coöperation of Senor Federico Maison, Director of the Central Office of Statistics and Meteorology.

San José	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

DANISH SERIES.

Furnished by the co operation of Captain N. Hoffmeyer, Director of the Royal Danish Meteorological Institute at Copenhagen.

Copenhagen	.....	.....	30.14	765.5	33.6	0.9	98	NW	.....	.....	2	.....	10	.....	.....	.....	.....	Foggy	
Fanöe	.....	.....	30.16	766.0	39.0	3.9	93	SW	.....	.....	2	.....	7	.....	.....	.....	.....	.....	
Godthaab, (Greenland)	.....	.....	28.99	736.3	9.9	—12.3	70	NNE	.....	.....	4	.....	10	.....	.....	.....	.....	.....	
Stykkisholm, (Iceland)	.....	.....	28.24	717.2	33.3	0.7	89	SW	.....	.....	6	.....	10	.....	.....	.....	.....	Snowing.....	
Thorshavn, (Faröe)	.....	.....	29.14	740.1	43.9	6.6	98	SSE	.....	.....	7	.....	10	.....	.....	.....	.....	Raining.....	
Vestervig	.....	.....	30.11	764.9	31.8	— 0.1	94	Calm	.....	.....	0	.....	2	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

NOTE.—The originals give the wind-force by the scale 0 to 6; occasionally, weather by Vienna symbols; no distinction between the amount of upper and lower clouds.

FRENCH SERIES.

Furnished by the cooperation of His Excellency, U. J. Le Verrier, Director of the Paris Observatory, and the respective Observers.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Alençon	.....	.....	30.28	769.2	46.4	8	97	SW	.....	.....	2	.....	10	.....	.....	0	0	Covered	Normal School.
Amiens	.....	.....	30.27	768.9	45.0	7.2	85	NNE	.....	.....	2	.....	5	.....	W	0	0	Cloudy.....	Normal School.
Avignon	.....	.....	30.24	768.1	46.4	8	67	N	.....	.....	4	.....	2	.....	E	0	0	Slightly cl'dy	Normal School.
Bar-sur-Seine	.....	.....	30.37	771.5	41.4	5.2	71	SW	.....	.....	1	.....	0	.....	.....	0	0	Clear	C. Saillard.
Beaumette, (near Angers)	.....	.....	30.25	768.4	48.6	9.2	97	SW	4.0	1.8	.....	.....	10	.....	SW	0.008	0.2	Raining.....	Beaumette Observ'tory.
Beauvais	.....	.....	30.28	769.0	43.2	6.2	83	SSE	.....	.....	1	.....	0	.....	.....	0	0	Clear	Normal School.
Besançon	.....	.....	30.26	768.6	36.0	2.2	88	S	.....	.....	2	.....	0	.....	.....	0	0	Clear	Normal School.
Bourg en Bresse	.....	.....	30.39	771.8	40.1	4.5	77	N	.....	.....	2	.....	0	.....	.....	0	0	Clear	Normal School.
Bourges	.....	.....	30.32	770.1	43.5	6.4	91	S	.....	.....	2	.....	1	.....	S	0	0	Clear	Normal School.
Brest	.....	.....	30.0	764.2	51.6	10.9	90	SW	.....	.....	3	.....	10	.....	SW	0.039	1.00	Rain & fog...	Naval Observatory.
Carcassonne	.....	.....	30.3	771.0	52.2	11.2	78	W	.....	.....	1	.....	2	.....	E	0	0	Slightly cl'dy	Normal School.
Caen	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Chartres	.....	.....	30.31	769.8	48.9	9.4	81	S	.....	.....	2	.....	0	.....	.....	0	0	Clear.....	Normal School.
Châlons-sur-Marne	.....	.....	30.35	771.0	41.2	5.1	78	SE	.....	.....	2	.....	0	.....	.....	0	0	Clear	Normal School.
Clermont	.....	.....	30.34	770.7	40.3	4.6	65	NE	.....	.....	1	.....	5	.....	NE	0	0	Cloudy.. ..	Puy de Dome Obs'y.
Commercy	.....	.....	30.36	771.2	33.8	1	85	W	.....	.....	1	.....	0	.....	.....	0	0	Clear	Normal School.
Commune de Gréasque*	.....	.....	30.20	767.1	46.4	8.0	61	NE	.....	.....	1	.....	8	.....	NE	0	0	.....	M. Kina.
Grenoble	.....	.....	30.34	770.5	40.1	4.5	71	ENE	.....	.....	2	.....	5kn	.....	NE	0	0	Cloudy.....	Normal School.
La Roche-sur-Yon	.....	.....	30.30	769.6	46.6	8.2	97	W	.....	.....	1	.....	10	.....	.....	0	0	Covered	Normal School.
Le Mans	.....	.....	30.27	768.8	47.8	8.8	86	SW	.....	.....	4	.....	5	.....	SW	0	0	Cloudy.....	Normal School.
Lons-Le-Saulnier	.....	.....	30.21	767.2	39.0	3.9	80	N	.....	.....	2	.....	0	.....	.....	0	0	Clear	Normal School.
Lorient	.....	.....	30.23	767.7	54.0	12.2	83	SW	.....	.....	2	.....	10	.....	.....	0.157	4.0	Light rain...	Naval Observatory.
Mâcon	.....	.....	30.29	769.4	41.4	5.2	87	WNW	.....	.....	8	.....	0	.....	.....	0	0	Clear	Normal School.
Metz	.....	.....	30.42	772.6	38.7	3.7	77	WNW	.....	.....	3	1c	.....	W	.....	0	0	.....	M. Schuster.
Mirecourt	.....	.....	30.35	770.9	36.7	2.6	96	W	.....	.....	2	.....	2	.....	NE	0	0	Slightly cl'dy	Normal School.
Nismes	.....	.....	30.24	768.2	48.9	9.4	71	N	.....	.....	4	.....	0	.....	.....	0	0	Clear	Normal School.
Orleans	.....	.....	30.34	770.6	46.4	8	70	SW	.....	.....	1	.....	0	.....	.....	0	0	Clear	Normal School.
Paris, Observatory	.....	.....	30.31	769.8	44.6	7.0	77	S	.....	.....	2	.....	0	.....	.....	0	0	Clear	National Observatory.
Parthenay	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Privas	.....	.....	30.32	770.0	43.7	6.5	.....	NNE	.....	.....	2	.....	2	.....	NNE	0	0	Slightly cl'dy	Normal School.
Rochefort, Observatory	.....	.....	30.33	770.3	53.1	11.7	79	SSW	.....	.....	3	.....	5	.....	NE	0.039	1.0	½ covered...	Naval Observatory.
Rouen	.....	.....	30.23	767.7	49.5	9.7	77	NW	.....	.....	2	.....	5	.....	W	0	0	Cloudy.....	Normal School.
Saint Lo	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Tarbes	29.20	741.6	30.30	769.7	46.2	7.9	74	W	.....	.....	2	.....	2	.....	E	0	0	Slightly cl'dy	Normal School.
Villefranche	.....	.....	30.36	771.2	41.7	5.4	84	NNE	.....	.....	1	.....	2	.....	.....	0	0	Slightly cl'dy	Normal School.
SUB-SERIES.																			
Fort de France, Martinique	.....	.....	29.97	761.1	77.0	25	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	L'Abbé Marchési.
Marseilles	.....	.....	30.16	766.0	52.5	11.4	63	NE	.....	.....	1	.....	3	.....	.....	0	0	Partly cl'dy.	Marseilles Observatory.
Mont-Louis	24.97	634.3	30.29	769.3	30.0	— 1.1	74	NW	16.6	8.33	.....	.....	8	.....	NW	0.012	0.3	.....	—. Falguère.
Montsouris, Paris	.....	.....	30.29	769.3	45.7	7.6	79	S	.....	.....	2	.....	0	.....	.....	0	0	.....	Montsouris Observatory
Perpignan	.....	.....	30.30	769.7	49.6	9.8	62	N	22.4	10.00	.....	.....	6	.....	NW	0	0	.....	Dr. Fines.
Pic du Midi, (Summit,) H. P.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. Baylac.
Pic du Midi, (Plantade,) H. P.	22.57	573.2	.....	.....	23.0	— 5.0	.....	N	.....	.....	1	.....	7	.....	.....	0.264	6.7	Cloudy.....	General de Nansouty.
Saint Maur, (near Paris)	.....	.....	30.30	769.5	46.4	8.0	72	S	.....	.....	1	...	0	.....	.....	0	0	Clear.....	E. Renou.
Toulouse	.....	.....	30.39	771.8	43.5	6.4	94	NNW	.....	.....	1	.....	9	.....	.....	0	0	Foggy	Toulouse Observatory.
Tours	.....	.....	30.28	769.1	49.3	9.6	74	SSW	.....	.....	2	.....	3	.....	WNW	0	0	.....	C. Marquet.
Versailles, (near Paris)	.....	.....	30.28	769.1	46.8	8.2	70	SW	.....	.....	2	.....	0	.....	.....	0	0	Very clear...	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai)	.....	.....	30.42	772.6	29.3	— 1.5	75	NW	8.4	3.75	.....	.....	0	.....	.....	Inap.	Inap.	.....	Marc Dechevrens, S. J.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

NOTE.—Generally, the originals give the wind-force by the scale 0 to 7; no distinction between upper and lower clouds, and, in the official series, the amount by the scale 0 to 4; the rain-fall as measured at 7, 8 or 9 a. m., local time; at Clermont, 9 a. m. of the following day; the weather in general terms as published. The elevation of Clermont is 388 meters, or 1,272.9 feet; Commune de Gréasque, 322 meters, or 1,056.4 feet; Tarbes, 308 meters, or 1,010 feet; Mont-Louis, 1,586.40 meters, or 5,204.8 feet; Pic du Midi, (Summit,) 2,877 meters, or 9,439.1 feet; Pic du Midi, Plantade,) 2,366 meters, or 7,762.6 feet. In correcting the Mont-Louis barometric observations for altitude, the constant 135. millimeters has been added. *Bouches-du-Rhône

GERMAN SERIES.

Furnished by the cooperation of Professor Dr. G. Neumayer, Director of the German Naval Observatory, Hamburg.

Bamberg	.....	.....	30.27	768.9	38.8	3.8	78	W	.....	.....	3	.....	10	.....	.....	0	0	.....	Prof. T. Hoh
Berlin	.....	.....	30. 8	769.0	42.8	6.0	71	S	.....	.....	2	.....	8	.....	.....	0.091	2.3	.....	Prof. Arndt.
Breslau	.....	.....	30.26	768.6	34.9	1.6	98	SW	.....	.....	3	.....	10	.....	.....	0.012	0.3	Foggy	Royal Univerality Obs'y
Carlsruhe	.....	.....	30.35	771.0	41.5	5.3	79	SW	.....	.....	1	.....	9	.....	.....	0	0	Foggy	A. Senz.
Cassel	.....	.....	30.30	769.5	41.4	5.2	77	SSW	.....	.....	2	.....	3	SW	.....	0	0	.....	Dr. H. Möhl.
Crefeld	.....	.....	30.27	768.8	48.9	6.6	73	S	.....	.....	3	.....	0	.....	.....	0.04	1.	.....	Director Lose.
Emden	.....	.....	30.34	770.5	41.9	5.5	86	S	.....	.....	1	.....	1	.....	.....	0	0	.....	Prof. Prestel.
Frankfort on the Main	.....	.....	30.37	771.4	40.1	4.5	85	SSW	.....	.....	1	.....	1	.....	.....	Inap.	Inap.	.....	Physical Society.
Friedrichshafen	28.90	734.0	30.41	772.3	35.2	1.8	84	NNE	.....	.....	5	.....	2	.....	.....	0	0	.....	M. Wilhelm.
Hamburg	.....	.....	30.25	768.3	39.9	4.4	87	SW	.....	.....	4	.....	7c,8	W	.....	0.059	1.5	Pleasant.....	Captain F. Hegemann.
Kiel	.....	.....	30.19	766.9	39.7	4.3	90	WSW	.....	.....	3	.....	5	.....	.....	0.024	0.6	.....	Prof. G. Karsten.
Königsberg, (Prussia)	.....	.....	30.30	769.7	27.9	— 2.3	90	SE	.....	.....	5	.....	10	.....	.....	0	0	.....	Prof. E. Luther.
Koslin	.....	.....	30.21	767.3	32.9	0.5	.....	SE	.....	.....	1	.....	10	.....	.....	0	0	.....	H. Müller.
Leipsic	.....	.....	30.29	769.3	41.0	5.0	76	SW	.....	.....	2	.....	8	W	.....	0.051	1.3	.....	Prof. Bruhns.
Memel	.....	.....	30.32	770.2	24.6	— 4.1	87	SSE	.....	.....	3	.....	10ks	.....	.....	0.008	0.2	Foggy	Reinbrecht & Skalweit.
Münster	.....	.....	29.04?	737.6?	43.7	6.5	53	SW	.....	.....	1	.....	0	.....	.....	0.059	1.5	.....	Prof. E. Heis.
Neufahrwasser	.....	.....	30.26	768.6	29.8	— 1.2	90	S	.....	.....	3	.....	10	.....	.....	0	0	.....	A Lothe.
Posen	.....	.....	30.23	767.9	35.4	1.9	93	S	.....	.....	2	.....	10	.....	.....	0.008	0.2	.....	Dr. Magener.
Strassburg, (in Alsace)	.....	.....	30.39	771.9	39.4	4.1	75	Calm	.....	.....	0	.....	3	.....	.....	0	0	.....	Dr. Schur.
Stuttgart	.....	.....	30.37	771.4	38.8	3.8	75	N	.....	.....	1	.....	10	.....	.....	0	0	.....	Prof. Schoder.
Thorn	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Dr. Hasenbalg.
Treves, (Trier)	.....	.....	30.30	769.5	38.1	3.4	80	W	.....	.....	2	.....	8	.....	.....	0	0	Foggy	Prof. Flesch.
Weissenburg, (Bavaria)	28.78	731.1	30.36	771.2	35.8	2.1	85	Calm	.....	.....	0	.....	10	.....	.....	0	0	Foggy.....	Dr. von Bebber.
Wustrow, Naval School	.....	.....	30.21	767.2	34.9	1.6	90	NNW	.....	.....	3	.....	10	.....	.....	0	0	.....	E. F. Schütz.
GERMAN NAVAL SERIES.																			
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

NOTE.—The elevation of Friedrichshafen is 413.4 meters, or 1,356.3 feet; Weissenburg, 431 meters, or 1,414.0 ft. In the originals the distinction between the amount of upper and lower clouds is not made. It is not always certain that the remarks in the weather column refer to the moment of observation.

GREEK SERIES.

Furnished by the coöperation of Professor Dr. J. F. Julius Schmidt, Director of the Royal Observatory at Athens.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Athens			29.97	761.3	60.4	15.8		W					k					Clear	

Note.—The originals give the barometer corrected, but not reduced to sea-level; occasionally the kind of clouds; the weather as published. They omit the humidity, wind-force, amount of cloudiness and rain-fall.

ITALIAN SERIES.

Furnished by the coöperation of His Excellency the Minister of Agriculture, Industry and Commerce, and the respective Observers.

Udine			30.13	765.2	45.3	7.4	65	SW	0.7	0.3			7			0	0		Prof. Giovanni Clodig
Stelvio	22.11	561.5			15.8	— 9.0		SE			1		0			0	0		Signora Ernesta Manfredi.
Valdobbia	22.13	562.0			20.1	— 6.6	80	NE			1		0			0	0		Ab. Dom. Mongini.
Padua			30.13	765.2	48.0	8.9	60	N	0.7	0.3			2	NE		0	0		Prof. Dott. Lorenzoni.
Vicenza			30.13	765.2	48.6	9.2	64	SE	2.5	1.1			2			0	0		Conte Alm. Da Schio.
Verona			30.12	765.1	48.4	9.1	64	E			1		0			0	0		Dott. B. Bertoncelli.
Bergamo	28.78	730.9	30.13	765.4	46.4	8.0	46	S			2		1			0	0		Prof Trionfini Carlo.
Domodossola			30.15	765.9	47.8	8.8	42	Calm			0		0			0	0		Prof. Giuseppe Orlza.
Milan			30.16	766.0	48.2	9.0	66	WNW			1		0			0	0		Ab. Gio. Capelli.
Pavia			30.16	766.1	43.5	6.4	65	SW			1		0			0	0		Prof. Gio. Cantoni.
Moncalieri			30.20	767.0	46.4	8.0	66	NNW	0.7	0.3			1			0	0		Prof. P. F. Denza.
Mondovi	28.22	716.9	30.20	767.1	44.2	6.8	43	NW			4		1	N		0	0		Prof. D. C. Bruno.
Porto Maurizio			30.15	765.8	56.5	13.6	18	NNE			4		4	E		0	0		Prof. L. Vassallo.
Genoa			30.13	765.3	54.5	12.5	30	NE	7.4	3.3			0			0	0		Prof. G. M. Garibaldi.
Piacenza			30.17	766.4	44.8	7.1	62	W	4.3	1.9			0			0	0		Dott. G. Manzi.
Parma			30.14	765.5	45.9	7.7	65	SW			2		4			0	0		Prof. P. Pigorini.
Florence			30.11	764.8	50.5	10.3	67	N			4		10	NE		0	0		Cav. F. Meucci.
Leghorn			30.08	763.9	51.1	10.6		ENE	2.5	1.1			4	NNE		0	0		Prof. P. Monte.
Siena	28.84	732.4	30.08	763.9	46.0	7.8	56	ENE	11.9	5.3			9	NE		0	0		Prof. L. Toscani.
Urbino	28.51	724.1	30.11	764.9	43.7	6.5	78	NNE			4		10			0.230	6.0	Raining	Prof. P. Serpieri.
Pesaro			30.10	764.6	49.5	9.7	65	NE	39.1	17.5			10	NE		0	0		Prof. Luigi Guidi.
Ancona			30.07	763.8	49.6	9.8	64	N			4		10			0.185	4.7	Raining	Prof. F. De— Bosis.
Grosseto			30.04	763.0	51.6	10.9	63	NNE			6		2	SE		0	0		Avv. P. Ponticelli.
Rome			29.97	761.3	53.6	12.0	55	NNE	11.9	5.3			6	E		0	0		Prof's. P. Secchi & L. Respighi.
Naples, O. U			29.96	760.9	54.7	12.6	48	N			4		5	SE		0	0		Prof. L. Palmieri.
Lecce			29.98	761.6	52.7	11.4	67	NE	4.9	2.2			3			0	0		Prof. C. De—Giorgi.
Cosenza			29.96	760.9	50.9	10.5	69	NW	3.8	1.7			10			0.063	1.6	Raining	Prof. F. D. Conti.
Cagliari																			Prof. A. Pacinotti.
Riposto, (Sicily)			29.86	758.4	51.1	10.6	90	NW			2		8	NE		0	0		Prof. F. Caffero.
Palermo			29.87	758.6	52.9	11.6	73	W	0.7	0.3			9			0.177	4.5	Raining	Prof. G. Cacciatore.
Caltanissetta	27.90	708.6	29.89	759.2	46.9	8.3	75	W			2		6	SE		0	0		Prof. A. Pagani.
Siracusa			29.81	757.1	55.9	13.3	63	E			2		9	SSW		0	0		Prof. V. Giuliano.
Sub-Series.																			
Naples, S. R.			29.98	761.4	51.1	10.6	49	E	3.1	1.4			3	E		0	0		Prof. F. Brioschi

Note.—The originals give the wind-force by the scale 0 to 4, or the velocity in kilometers per hour; generally, no distinction between upper and lower clouds; occasionally the weather by the Vienna symbols. The elevation of Stelvio is 2,543.0 meters, or 8,342.9 feet; Valdobbia, 2,548.0 meters or 8,359.3 feet; Bergamo, 379.6 meters, or 1,245.3 feet; Mondovi, 556 meters, or 1,824.2 feet; Siena, 348.5 meters, or 1,143.3 feet; Urbino, 451 meters, or 1,479.7 feet; Caltanissetta, 570.3 meters, or 1,871.0 feet.

Furnished by the coöperation of the Imperial University of Tokei, Japan.

JAPANESE SERIES.

Tokei			30.35	770.9	33	0.6		Calm	0	0			8			0	0		Prof. P. V. Veeder.

Note.—The originals give the amount of cloudiness by the scale 0 to 4 without distinguishing between upper and lower clouds. The rain-fall is measured at 7 a. m., local time

By authority of the Secretary of Public Works.

MEXICAN SERIES.

Furnished by the coöperation of Senor Mariano Barcena, Director of the Central Meteorological Observatory in the City of Mexico.

Mexico																		Mariano Barcena. Vicente Reyes. Miguel Perez. (Engineers in charge.)	

Note.—The elevation of Mexico is 2,290 meters, or 7,512.9 feet. The rain-fall is measured at 6 a. m., local time.

NETHERLANDS' SERIES.

Furnished by the coöperation of Professor Buys Ballot, Director of the Royal Meteorological Institute of the Netherlands at Utrecht.

Flushing			30.22	767.6	43.5	6.4		SSW			4					0	0		
Groningen			30.15	765.8	40.5	4.7		S			4					0.024	0.6		
Helder			30.16	766.0	44.6	7.0		S			4					0	0		
Utrecht			30.20	767.0	43.2	6.2	79	SSW			4		2			0	0		Light cloudy

Note.—The originals give the wind-pressure in kilograms per square meter; for Utrecht, they give the weather as published, from which the amount of cloudiness is taken by the scale 0 to 4, without distinguishing between upper and lower clouds. It is assumed that the barometer readings have been reduced to sea-level.

NORWEGIAN SERIES.

Furnished by the coöperation of Professor H. Mohn, Director of the Royal Norwegian Meteorological Institute at Christiania.

Bergen			29.96	761.0	34.2	1.2	82	ESE	4.0	1.8			10			0.039	1.0		
Brönö			30.00	762.1	33.1	0.6	71	ESE	8.9	4			3						
Christiania			30.17	766.3	22.1	— 5.5	87	NW	0	0			10			0	0		
Tromsö			29.72	754.9	34.2	1.2	62	SE	26.8	12			10			0	0		

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols. The cloudiness and weather at Bergen refer to 2h., p. m., local time, instead of 1h., 4 mi

PORTUGUESE SERIES.

Furnished by the coöperation of J. C. de Brito Capello, Director of the Meteorological Observatory of the Infante Don Luiz at Lisbon.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Force. 0—10.	Clouds. Amount. Upper. 0—10.	Clouds. Amount. Lower. 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the last 24 hours. Inches.	Rain-fall or melted snow in the last 24 hours. Millimeters.	Weather.	Observer.
Angra, (Azores)	.....	.....	30.38	770.4	60.4	15.8	93	W	6.9	3.1	.....	.....	8	.....	.....	0	0	.....	Dr. J. A. Sampaio.
Campo Major	.....	.....	30.36	771.1	57.2	14.0	80	WNW	5.0	2.22	.....	.....	8	WNW	.....	0	0	.....	Dr. A. M. R. dos Santos.
Funchal, (Madeira)	.....	.....	30.41	772.4	62.8	17.1	87	E	7.6	3.39	.....	.....	8	.....	.....	0	0	.....	Capt. D. A. da Cunha.
Lisbon	.....	.....	30.45	773.8	55.8	13.2	69	NE	4.9	2.2	.....	.....	4	.....	.....	0	0	.....	The Observatory.
Ponta Delgada, (Azores)	.....	.....	30.40	772.1	59.7	15.4	89	SW	11.2	5.0	.....	.....	10	.....	.....	0.020	0.5	.....	

NOTE.—The originals give the wind-velocity in kilometers per hour; occasionally, the weather by the Vienna symbols; the amount of cloudiness without distinguishing between upper and lower clouds; the barometer corrected but not reduced to sea-level. The rain-fall at Lisbon is measured at noon, instead of 0 h. 6 m., p. m.

RUSSIAN SERIES.

Furnished by the cooperation of Professor H. Wild, Director of the Imperial Central Physical Observatory of Russia, at St. Petersburg.

Warsaw	.....	.....	30.32	770.2	23.0	— 5.0	93	ESE	9	4	.....	.....	10	.....	.....	.....	.....	.....	Astronomical Obs.
Wilna	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Astronomical Obs.
Dorpat	.....	.....	30.48	774.1	18.9	— 7.3	85	SSE	4	2	.....	.....	10	.....	.....	.....	.....	.....	Physical Cabinet.
St. Petersburg	.....	.....	30.54	775.7	14.4	— 9.8	97	SE	11	5	.....	.....	10	.....	.....	.....	.....	.....	Central Physical Obs.
Kuopio	.....	.....	30.42	772.7	6.8	—14.0	.....	SE	18	8	.....	.....	10	.....	.....	.....	.....	.....	Ch. Forsten.
Kieff	.....	.....	30.33	770.4	12.4	—10.9	97	NNE	9	4	.....	.....	10	.....	.....	.....	.....	.....	Physical Cabinet.
Nikolaiev	.....	.....	30.19	766.8	20.7	— 6.3	82	NE	13	6	.....	.....	9	.....	.....	.....	.....	.....	Kurdakof.
Kertch	.....	.....	29.79	761.1	36.3	2.4	94	N	7	3	.....	.....	10	.....	.....	.....	.....	Rain & fog	Lagorio.
Moscow	.....	.....	30.72	780.3	16.0	— 8.9	88	SW	7	3	.....	.....	10	.....	.....	.....	.....	.....	Meteorological Obs.
Lugan	.....	.....	30.19	766.7	10.7	— 8.5	85	ENE	27	12	.....	.....	10	.....	.....	Blank	Blank	.....	Meteorological Obs.
Archangel	.....	.....	30.59	777.0	—13.4	—25.2	80	ESE	9	4	.....	.....	2	.....	.....	.....	.....	.....	Ogorodnikof.
Tiflis	28.79	731.3	30.27	768.8	39.4	4.1	74	E	4	2	.....	.....	10	.....	.....	.....	.....	.....	Physical Observatory.
Astrakhan	.....	.....	30.45	773.5	23.2	— 4.9	67	E	11	5	.....	.....	4	.....	.....	.....	.....	.....	Sebastianof.
Kasan	.....	.....	30.74	780.9	— 5.3	—20.7	89	N	4	2	.....	.....	2	.....	.....	.....	.....	.....	Physical Cabinet.
Orenburg	.....	.....	30.59	777.0	—11.7	—24.3	55	E	13	6	.....	.....	5	.....	.....	.....	.....	.....	Tschernischei.
Ekaterinburg	29.34	745.3	30.39	772.0	5.5	—14.7	76	WSW	13	6	.....	.....	1	.....	.....	.....	.....	.....	Meteorological Obs.
Nukuss	.....	.....	30.51	775.0	19.0	— 7.2	84	ENE	4	2	.....	.....	0	.....	.....	.....	.....	.....	
Kasaly	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Tashkend	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Boltrof.
Barnaul	.....	.....	30.43	772.8	—13.9	—25.5	90	W	4	2	.....	.....	0	.....	.....	.....	.....	.....	Michelson.
Yeniseisk	.....	.....	29.80	756.8	4.5	—15.3	82	SW	13	6	.....	.....	10	.....	.....	.....	.....	.....	Meteorological Obs.
Irkutsk	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Marks.
Peking, (China)	.....	.....	30.30	769.7	24.4	— 4.2	77	Calm	0	0	.....	.....	0	.....	.....	.....	.....	.....	Usolcef.
Nertchinsk	27.85	707.3	30.23	767.9	—20.2	—29.0	93	Calm	0	0	.....	.....	0	.....	.....	.....	.....	.....	Physical Observatory.
Vladivostock	.....	.....	30.22	767.5	11.5	—11.4	68	NW	9	4	.....	.....	1	.....	.....	.....	.....	.....	Meteorological Obs.
Nikolaievsk, on the Amoor	.....	.....	.....	.....	— 5.8	—21.0	.....	Calm	0	0	.....	.....	0	.....	.....	.....	.....	.....	

NOTE.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols; they omit the rain-fall. The elevation of Tiflis is 409 meters, or 1,341.8 feet; Ekaterinburg, 306.4? m., or 1,005.2? ft.; Tashkend, 494.2? m., or 1,621.3? ft.; Irkutsk, 392 m., or 1,286 ft.; Nertchinsk, 592.0? m., or 1,942.2? ft.

SPANISH SERIES.

Furnished by the cooperation of Antonio Aguilar, Director of the Royal Observatory at Madrid, and of Don Cecilio Pujazon, Captain R. N. Director of the Naval Observatory at San Fernando.

Madrid	.....	.....	30.39	772.0	47.1	8.4	71	S	5.2	2.33	.....	2	0	NE	.....	0'	0	Light clouds	Royal Observatory.
San Fernando	.....	.....	30.40	772.2	53.8	12.1	70	N	9.2	4.1	.....	1	3	N	N'	.....	.....	.....	Naval Observatory.
	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

NOTE.—The originals give the weather in general terms, as published; rain-fall for San Fernando from preceding to following midnight; wind-velocity for Madrid in kilometers per hour.

SWEDISH SERIES.

Furnished by the cooperation of Professor R. Rubenson, Director of the Royal Swedish Meteorological Institute, at Stockholm, and of Dr. H. H. Hildebrandsson, Chief of the Meteorological Division of the Upsala Observatory.

Haparanda	.....	.....	30.31	769.9	11.5	—11.4	93	SE	.....	.....	.....	4	10	.....	.....	0	0	.....	
Umea	.....	.....	30.25	768.3	21.9	— 5.6	100	SW	.....	.....	.....	6	10	.....	.....	Inap.	Inap.	Snowing	
Hernosand	.....	.....	30.21	767.4	27.3	— 2.6	98	SW	.....	.....	.....	2	10	.....	.....	0.130	3.3	Snowing	
Stockholm	.....	.....	30.21	767.2	29.1	— 1.6	92	SSE	.....	.....	.....	2	10	.....	.....	Inap.	Inap.	Snowing	
Wisby	.....	.....	30.27	768.9	29.1	— 1.6	92	S	.....	.....	.....	4	10	.....	.....	0	0	.....	
SUB-SERIES.																			
Upsala	.....	.....	30.22	767.5	27.5	— 2.5	97	ESE	4.7	2.1	.....	.....	10	.....	.....	0.131	3.33	Snowing	Dr. Hildebrandsson.
	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

NOTE.—The originals give the wind-force by the scale 0 to 6, and Upsala also velocity in meters per second; occasionally, the weather by the Vienna symbols, or in general terms; no distinction between the amount of upper and lower clouds. The rain-fall is measured at 8 a. m., local time.

SWISS SERIES.

Furnished by the coöperation of Professor R. Wolf, Director of the Observatory at Zurich, and of Professor E. Plantamour, Director of the Observatory at Geneva.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Geneva	28.87	733.2	30.34	770.7	37.8	3.2	72	NNW	.....	.....	1	.....	4	.....	.....	0.012	0.3	Clouds	The Observatory.
Zurich	28.67	728.2	30.37	771.4	36.0	2.2	80	NW	.....	.....	1	.....	2	.....	.....	0	0	Clear	The Observatory.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Note.—For Geneva the corresponding departures from the normal values are: Barometer, +5.6 mm; Thermometer, +1.7 cent.; Relative Humidity, —7 per cent.

Note.—The rain-fall is measured at Zurich at 7 a. m. on the following day. The originals give the barometer corrected but not reduced to sea-level; the wind-force by the scale 0 to 4 for Zurich; the amount of cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The elevation of Geneva is 408 meters, or 1,339 feet, and that of Zurich 470 meters, or 1,542 feet.

TURKISH SERIES.

Furnished by the coöperation of A. Coumbary, Effendi, Director of the Central Observatory at Constantinople, and of Professor C. V. A. Van Dyck, Superintendent of the Lee Observatory at Beirut.

Constantinople	.....	.....	30.04	763.0	45.5	7.5	93	N	22	10.0	.....	.....	10	.....	N	0.126	3.2	.....	
Fao, (Persian Gulf)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Salonica	.....	.....	30.06	763.5	59.4	15.2	.....	NW	.....	.....	1	.....	10	.....	.....	.....	.....	.....	
Valona	.....	.....	29.93	760.3	52.7	11.5	.....	W	.....	.....	1	.....	2	.....	.....	.....	.....	.....	
Varna	.....	.....	30.00	762.0	35.6	2.0	.....	NE	.....	.....	2	.....	10	.....	.....	.....	.....	Snowing	
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y	.....	.....	30.04	763.1	65.8	18.8	64	SW	.....	.....	3	.....	3n	.....	SW	Inap.	Inap.	*D. clouds	Prof. C. V. A. Van Dyck

Note.—The originals give the wind-force by the scale 0 to 7, (except Beirut, by the scale 0 to 12, and Constantinople velocity in meters per second;) the weather in general terms as published; no distinction between upper and lower clouds, and, except Constantinople and Beirut, the amount by the scale 0 to 4. It is assumed that the barometer is reduced to sea-level. * Detached clouds.

CANADIAN SERIES.

Furnished by the coöperation of Professor G. T. Kingston, Director of the Magnetic Observatory at Toronto, and Superintendent of the Meteorological Office of the Dominion of Canada, and the respective Observers. Those marked with a star (*) are also telegraphed daily to the office of the Chief Signal Officer, U. S. Army.

Bathurst, N. B	.....	.....	30.00	762.0	— 1.5	—18.6	84	N	2	0.9	.....	.....	10	.....	.....	0	0	.....	Hon. J. Ferguson.
Brockville, Ontario	.....	.....	29.72	754.9	5	—15.0	.....	N	5	2.2	.....	.....	10s	.....	N	1.35	34.3	Light snow	W. R. Bigg.
*Chatham, N. B	.....	.....	29.96	761.0	— 4	—20.0	100	N	6	2.7	.....	.....	10n	.....	N	0.20	5.1	Heavy snow	G. A. Blair.
Charlottetown, P. E. Island	.....	.....	29.93	760.2	6	—14.4	81	NE	15	6.7	.....	.....	10n	.....	.....	0.250	6.35	Light snow	H. J. Cundall, C. E.
Cornwall, Ontario	.....	.....	29.66	753.4	5.9	—14.5	87	E	.....	.....	4	.....	10n	.....	.....	0.50	12 7	Snowing	James Smith, M. A.
Dalhousie, N. B	.....	.....	30.05	763.3	.....	.....	.....	NW	.....	.....	1	.....	.....	.....	.....	0.05	1 3	Snowing	H. A. Johnson.
Esquimault, B. C	.....	.....	29.42	747.3	42.1	5.6	92	SW	.....	.....	.....	.....	10n	.....	.....	0.23	5.8	Cloudy	W. H. Bevis.
Fredericton, N. B	.....	.....	29.94	760.5	1.0	—17.2	91	NE	9	4.0	.....	.....	10n	.....	.....	0.250	6.35	Snowing	Prof. Harrison.
*Fort Garry, Manitoba	.....	.....	30.12	765.0	—36	—37.8	100	S	14	6.3	.....	0	0	.....	.....	0	0	Clear	James Stewart.
Goderich, Ontario	.....	.....	29.96	761.5	12.7	—10.7	80	N	.....	.....	2	3k	0	N	.....	0.40	10.2	Clearing	H. J. Strang, M. A.
Granton, Ontario	28.70	729.0	29.91	759.7	5.6	—14.7	.....	NE	.....	.....	1	0?	0?	.....	.....	0.500	12.70	Cloudy ?	James Grant.
*Halifax, N. S	.....	.....	29.72	754.9	18	— 7.8	84	NE	12	5.4	.....	.....	8n	.....	.....	0.940	23.88	Heavy snow	F. Allison, M. A.
Hamilton, Ontario	.....	.....	29.91	759.7	12.2	—11.0	79	SW	.....	.....	1	0	0	.....	.....	0.80	20.3	Clear	G. Dickson.
Heart's Content, N. F	.....	.....	30.12	765.0	6	—14.4	100	E	.....	.....	1	.....	10	.....	.....	0	0	Overcast	E. Weedon.
*Kingston, Ontario	.....	.....	29.79	756.7	9	—12.8	87	NW	3	1.3	.....	.....	10n	.....	NE	0.75	19.1	Light snow	S. Woods, M. A
*Montreal, Quebec	.....	.....	29.62	752.3	5	—15.0	95	NE	23	10.3	.....	.....	10n	.....	.....	0.35	8.9	Light snow	C. H. McLeod, C. E.
*Ottawa, Ontario	.....	.....	29.64	752.8	7	—13.9	79	NW	10	4.5	.....	.....	10n	.....	NW	0.30	7.6	Light snow	J. B. Haney.
*Parry Sound, Ontario	.....	.....	29.93	760.2	3	—16.1	68	N	11	4.9	.....	0	0	.....	.....	0.22	5.6	Clear	Rev. R. Mosley.
Port Dover, Ontario	.....	.....	29.88	758.9	13	—10.6	93	N	7	3.1	.....	.....	Haze	.....	.....	0.36	9.1	Cloudy	H. Morgan.
Port Hastings, N. S	.....	.....	29.87	758.7	10.8	—11.8	.....	SE	10	4.5	.....	.....	.....	.....	.....	0.30	7.6	Blustering	Peter Grant
Port Stanley, Ontario	.....	.....	29.92	760.0	7	—13.9	89	W	8	3.6	.....	2ck	0	W	.....	0.65	16.5	Clear	M. Payne.
*Quebec, Quebec	.....	.....	29.76	755.9	2	—16.7	72	NE	40	17.9	.....	.....	10n	.....	NE	0.80	20.3	Heavy snow	Capt. Ashe, R. N.
*Rockliffe, Ontario	.....	.....	29.92	760.0	4	—15.6	85	NW	8	3.6	.....	.....	10s	.....	SE	0.22	5.6	Light snow	
St. John, N. B	.....	.....	29.79	756.7	6	—14.4	88	NE	10	4.5	.....	.....	10n	.....	.....	0.595	15.12	Snowing	G. Murdoch, C. E.
*Saugeen, Ontario	.....	.....	29.91	759.7	9	—12.8	59	E	4	1.8	.....	2cs	0	.....	.....	0.30	7.6	Clear	K. Stewart.
Stayner, Ontario	.....	.....	29.89	759.2	7	—13.9	75	N	6	2.7	.....	0	0	.....	.....	0.47	11.9	Clear	R. J. Cole.
Stratford, Ontario	28.50	723.9	29.90	759.4	6.0	—14.4	94	NW	2	0.9	.....	0	0	.....	.....	0.45	11.4	Fine	C. J. MacGregor, M. A.
*Sydney, C. B	.....	.....	29.93	760.2	12	—11.1	92	NE	8	3.6	.....	.....	10n	.....	.....	0.28	7.1	Light snow	T. C. Hill.
*Toronto, Ontario	.....	.....	29.87	758.7	10	—12.2	94	NW	10	4.5	.....	5c	2s	NW	NW	0.55	14.0	Fair	Magnetic Observatory.
Woodstock, Ontario	.....	.....	29.96	761.0	7.7	—13.5	98	N	3	1.3	.....	0	0	.....	.....	0.20	5.1	Clear	J. Montgomery.
Sub-Series.																			
St. Johns, Newfoundland	.....	.....	30.19	766.8	10.0	—12.2	.....	Calm	.....	.....	.....	.....	10n	.....	.....	.....	.....	Snowing	John Delany
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Note.—The originals for Brockville, Charlottetown, Port Dover, Port Stanley, Stayner, St. Johns, N. F. and those telegraphed, give the amount of cloudiness by the scale 0 to 4. The elevation of Granton is 1,015 feet, or 309.4 m.; Stratford, 1,182 feet, or 360.3 m.

UNITED STATES SERIES.

Furnished by the coöperation of Bvt. Brig. Gen. Albert J. Myer, Chief Signal Officer, U. S. Army.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather	Observer.
Albany, N. Y.	.....	.....	29.59	751.6	21	— 6.1	85	Calm	0	0	.....	.....	10s	.....	.....	0.49	12.4	Cloudy.....	
Alpena, Mich.	.....	.....	30.00	762.0	10	—12.2	89	NW	8	3.6	.....	.....	10n	.....	.....	0.30	7.6	Light snow..	
Atlantic City, N. J.	.....	.....	29.71	754.6	36	2.2	100	S	6	2.7	.....	.....	10s	.....	SW	0.47	11.9	Cloudy.....	
Augusta, Ga.	.....	.....	29.96	761.0	67	19.4	89	SW	4	1.8	.....	.....	10s	.....	SW	0.02	0.5	Cloudy.....	
Baltimore, Md.	.....	.....	29.74	755.4	37	2.8	90	Calm	0	0	.....	.....	Fog	.....	.....	0.34	8.6	Foggy	
Barnegat, N. J.	.....	.....	29.68	753.9	37	2.8	100	SW	12	5.4	.....	.....	10s, fg	.....	W	0.81	20.6	Cloudy.....	
Bismarck, Dakota	27.91	708.9	29.81	757.2	—27	—32.8	49	SE	3	1.3	.....	8k	0	NW	.....	0	0	Fair	
Boston, Mass.	.....	.....	29.64	752.8	19	— 7.2	92	W	10	4.5	.....	.....	10s	.....	.....	0.85	21.6	Cloudy.....	
Breckenridge, Minn.	.....	.....	30.21	767.3	—28	—33.3	46	E	8	3.6	.....	0	0	.....	.....	0	0	Clear	
Buffalo, N. Y.	.....	.....	29.82	757.4	16	— 8.9	66	N	7	3.1	.....	.....	10s	.....	.....	0.18	4.6	Cloudy.....	
Burlington, Vt.	.....	.....	29.57	751.1	8	—13.3	100	N	1	0.4	.....	.....	10n	.....	.....	0.30	7.6	Light snow..	
Cairo, Ill.	.....	.....	30.17	766.3	24	— 4.4	74	NW	10	4.5	.....	.....	10s	.....	.....	0.23	5.8	Cloudy.....	
Cape Hatteras, N. C.	.....	.....	29.90	759.4	58	14.4	87	SW	24	10.7	.....	5ck	5s	W	SW	0.06	1.5	Cloudy.....	
Cape Henry, Va.	.....	.....	29.79	756.7	66	18.9	79	SW	18	8.0	.....	2k	8s	SW	SW	0.06	1.5	Fair	
Cape Lookout, N. C.	.....	.....	29.99	761.7	55	12.8	93	SW	28	12.5	.....	10ck	0	SW	.....	0.08	2.0	Cloudy.....	
Cape May, N. J.	.....	.....	29.72	754.9	39	3.9	91	SE	10	4.5	.....	.....	10s	.....	S	0.23	5.8	Cloudy.....	
Charleston, S. C.	.....	.....	30.04	763.0	59	15.0	87	S	12	5.4	.....	2c	5cs	W	W	0	0	Fair	
Cheyenne, Wyoming	23.59	599.2	29.53	750.0	22	— 5.6	48	SW	4	1.8	.....	.....	10s	.....	.....	0	0	Cloudy.....	
Chicago, Ill.	.....	.....	30.07	763.8	12	—11.1	80	NW	10	4.5	.....	.....	10s	.....	.....	1.02	25.9	Cloudy.....	
Cincinnati, Ohio	.....	.....	29.95	760.7	30	— 1.1	68	NW	13	5.8	.....	.....	10ks	.....	NW	0.88	22.4	Cloudy.....	
Cleveland, Ohio	.....	.....	29.96	760.7	21	— 6.1	85	W	10	4.5	.....	.....	10s	.....	SW	0.69	17.5	Cloudy.....	
Corsicana, Tex.	.....	.....	30.29	769.4	20	— 6.7	70	N	10	4.5	.....	.....	10s	.....	.....	0	0	Cloudy.....	
Davenport, Iowa	.....	.....	30.22	767.6	— 2	—18.9	84	Calm	0	0	.....	4cs	0	W	.....	0.52	13.2	Fair	
Denison, Tex.	.....	.....	30.34	770.6	13	—10.6	80	NW	5	2.2	.....	5cs	5s	N	.....	0	0	Cloudy.....	
Denver, Col.	24.42	620.3	29.64	752.8	9	—12.8	78	S	8	3.6	.....	0	5s	.....	.....	0.10	2.5	Fair	
Detroit, Mich.	.....	.....	29.93	760.2	14	—10.0	81	NW	7	3.1	.....	0	5s	.....	NE	0.39	9.9	Fair	
Dodge City, Kan.	27.40	696.0	29.97	761.2	— 2	—18.9	67	S	4	1.8	.....	0	0	.....	.....	0.02	0.5	Clear	
Dubuque, Iowa	.....	.....	30.18	766.6	— 1	—18.3	68	Calm	0	0	.....	.....	10s	.....	.....	0.18	4.6	Cloudy.....	
Duluth, Minn.	.....	.....	30.18	766.6	—12	—24.4	75	Calm	0	0	.....	.....	10s	.....	.....	0	0	Cloudy.....	
Eastport, Me.	.....	.....	29.70	754.4	14	—10.0	81	NE	36	16.1	.....	.....	10n	.....	.....	0.61	15.5	Light snow..	
Erie, Pa.	.....	.....	29.88	758.9	20	— 6.7	100	Calm	0	0	.....	.....	10n	.....	.....	0.54	13.7	Light rain...	
Escanaba, Mich.	.....	.....	30.12	765.0	1	—17.2	72	NW	4	1.8	.....	.....	10s	.....	NW	0	0	Cloudy.....	
Fort Gibson, Indian Ter.	.....	.....	30.34	770.6	7	—13.9	77	W	4	1.8	.....	.....	10s	.....	W	Inap.	Inap.	Cloudy.....	
Ft. St. Michael, Alaska	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Fort Sill, Indian Ter.	29.03	737.3	30.27	768.8	14	—10.0	28	Calm	0	0	.....	5cs	0	.....	.....	0	0	Fair	
Fort Sully, Dakota	28.14	714.7	30.03	762.7	—18	—27.8	67	SE	12	5.4	.....	0	0	.....	.....	0	0	Clear	
Florence, Arizona	28.49	723.6	30.03	762.7	48	8.9	.....	NW	.....	.....	.....	0	0	.....	.....	0	0	Clear	
Galveston, Tex.	.....	.....	30.11	764.8	41	5.0	65	N	32	14.3	.....	.....	10s	.....	.....	0	0	Cloudy.....	
Grand Haven, Mich.	.....	.....	30.04	763.0	10	—12.2	79	N	6	2.7	.....	0	5s	.....	W	0.32	8.1	Fair	
Indianapolis, Ind.	.....	.....	30.06	763.3	24	— 4.4	87	NW	7	3.1	.....	.....	10s	.....	W	0.57	14.5	Threatenin;	
Indianola, Tex.	.....	.....	30.16	764.5	36	2.2	62	N	30	13.4	.....	.....	10s	.....	N	0	0	Cloudy.....	
Jacksonville, Fla.	.....	.....	30.16	764.5	65	18.3	94	S	3	1.3	.....	.....	10s	.....	.....	0	0	Cloudy.....	
Keokuk, Iowa	.....	.....	30.20	767.1	0	—17.8	85	NW	4	1.8	.....	0	0	.....	.....	0.10	2.5	Clear	
Key West, Fla.	.....	.....	30.11	764.8	72	22.2	90	SE	8	3.6	.....	0	0	.....	.....	0	0	Clear	
Kittyhawk, N. C.	.....	.....	29.89	759.2	59	15.0	87	SW	15	6.7	.....	.....	10s	.....	W	0.01	0.3	Cloudy.....	
Knoxville, Tenn.	.....	.....	29.93	760.2	50	10.0	64	SW	7	3.1	.....	8ck	0	W	.....	0.59	15.0	Cloudy.....	
La Crosse, Wis.	.....	.....	30.18	766 0	— 5	—20.6	68	N	2	0.9	.....	Haze	Haze	.....	.....	0.42	10.7	Hazy.....	
Leavenworth, Kan.	.....	.....	30.32	770.1	—10	—23.3	78	NW	6	2.7	.....	0	0	.....	.....	0.16	4.1	Clear.....	
Louisville, Ky.	.....	.....	30.04	763.0	32	0.0	89	W	6	2.7	.....	.....	10s	.....	SW	1.72	43.7	Cloudy	
Lynchburg, Va.	.....	.....	29.80	756.9	43	6.1	95	Calm	0	0	.....	10k	Fog	SW	.....	0.04	1.0	Cloudy.....	
Malone, N. Y.	.....	.....	29.66	750.8	6	—14.4	100	NE	5	2.2	.....	.....	10n	.....	NE	0.40	10.2	Heavy snow	
Marquette, Mich.	.....	.....	30.09	764.3	2	—16.7	72	W	16	7.2	.....	.....	10s	.....	.....	0	0	Cloudy.....	
Memphis, Tenn.	.....	.....	30.15	765.8	31	— 0.6	69	N	10	4.5	.....	.....	10s	.....	NW	1.02	25.9	Cloudy.....	
Milwaukee, Wis.	.....	.....	30.12	765.0	2	—16.7	86	NW	10	4.5	.....	.....	10s	.....	.....	1.22	31.0	Cloudy.....	
Mobile Ala.	.....	.....	30.02	762.5	59	15.0	94	N	6	2.7	.....	.....	10s	.....	.....	0.51	13.0	Cloudy.....	
Montgomery, Ala.	.....	.....	30.01	762.2	61	16.1	63	NW	3	1.3	.....	10cs	0	W	.....	0.03	0.8	Cloudy.....	
Morgantown, W. Va.	25.76	730.5	29.82	757.4	43	6.1	66	SW	13	5.8	.....	.....	10s	.....	SW	1.49	37.8	Cloudy.....	
Mt. Washington, N. H.	23.10	586.7	29.46	748.3	19	— 7.2	100	NW	84	37.6	.....	.....	10n	.....	NW	1.27	32.3	Heavy snow	
Nashville, Tenn.	.....	.....	30.03	762.7	37	2.8	80	NW	5	2.2	.....	.....	10s	.....	NW	0.83	21.1	Cloudy.....	
New Haven, Conn.	.....	.....	29.67	753.6	32	0.0	85	SW	10	4.5	.....	.....	Fog	.....	.....	0.70	17.8	Foggy	
New London, Conn.	.....	.....	29.67	753.6	32	0.0	89	SE	3	1.3	.....	.....	10s, fg	.....	.....	0.88	22.4	Cloudy.....	
New Orleans, La.	.....	.....	30.03	762.7	57	13.9	75	N	8	3.6	.....	.....	10n	.....	.....	0.05	1.3	Light rain...	
Newport, R. I.	.....	.....	29.65	753.1	29	— 1.7	89	W	6	2.7	.....	.....	10ks	.....	W	0.89	22.6	Threatening	
New York, N. Y.	.....	.....	29.67	753.6	33.3	0.7	86	Calm	0	0	.....	.....	10s, fg	.....	.....	0 79	20.1	Cloudy.....	
Norfolk, Va.	.....	.....	29.80	756.9	65	18.3	83	SW	20	8.9	.....	0	8s	.....	SW	0.06	1.5	Fair	
North Platte, Neb.	26.88	682.7	29.72	754.9	— 4	—20.0	82	S	12	5.4	.....	0	0	.....	.....	Inap.	Inap.	Clear	
Omaha, Neb.	29.0-	737.1	30.28	769.1	—15	—26.1	71	Calm	0	0	.....	0	0	.....	.....	0.14	3.6	Clear	
Oswego, N. Y.	.....	.....	29.73	755.1	13	—10.6	91	NW	16	7.2	.....	.....	10n	.....	.....	0.36	9.1	Light snow..	
Pembina, Dakota	.....	.....	30.09	764.3	—32	—35.6	.....	S	12	5.4	.....	0	0	.....	.....	0	0	Clear	
Philadelphia, Pa.	.....	.....	29.72	754.9	34	1.1	95	W	5	2.2	.....	.....	10n, fog	.....	W	0.76	19.3	Light rain...	
Pike's Peak, Col.	17.26	438.4	29.47	748.5	— 3	—19.4	66	SW	30	13.4	.....	2cs	1s	.....	.....	0.19	4.8	Fair	
Pittsburgh, Pa.	.....	.....	29.79	756.7	41	5.0	78	NW	9	4.0	.....	.....	10s	.....	NW	0.65	16.5	Cloudy.....	
Port Huron, Mich.	.....	.....	29.90	759.4	20	— 6.7	85	NW	5	2.2	.....	.....	10s	.....	.....	0.83	21.1	Cloudy.....	
Portland, Me.	.....	.....	29.68	753.9	12	—11.1	100	N	14	6.3	.....	.....	10n	.....	.....	0.61	15.5	Light snow..	
Portland, Oregon	.....	.....	29.65	753.1	42	5.6	91	S	4	1.8	.....	.....	8s	.....	.....	0.89	22.6	Cloudy.....	
Punta Rassa, Fla.	.....	.....	30.13	765.3	69.5	20.8	95	SE	6	2.7	.....	.....	Fog	.....	.....	0	0	Foggy	
Rochester, N. Y.	.....	.....	29.77	756.1	15	— 9.4	83	NW	8	3.6	.....	.....	10n	.....	.....	0.35	8.9	Light snow..	
Salt Lake City, Utah	25.42	645.7	29.75	755.6	24	— 4.4	74	SE	8	3.6	.....	.....	10s	.....	.....	0.03	0.8	Cloudy.....	
Sandy Hook, N. J.	.....	.....	29.68	753.9	34	1.1	90	SE	2	0.9	.....	.....	Fog	.....	.....	0.93	23.6	Foggy	
San Diego, Cal.	.....	.....	30.10	764.5	44	6.7	54	NE	4	1.8	.....	0	0	.....	.....	0.06	1.5	Clear	
San Francisco, Cal.	.....	.....	30.03	762.7	50	10.0	91	SE	3	1.3	.....	.....	10s	.....	.....	0	0	Threatening	
Santa Fé, N. M.	23.04	585.2	29.58	751.3	20	— 6.7	56	NW	17	7.6	.....	2k	0	NW	.....	0.05	1.3	Clear	
Savannah, Ga.	.....	.....	30.06	763.5	65	18.3	89	SW	8	3.6	.....	8c	0	SW	.....	0	0	Fair	
Shreveport, La.	.....	.....	30.27	768.8	26	— 3.3	100	N	6	2.7	.....	.....	10n	.....	.....	0.10	2.5	Light Sleet..	
Smithville, N. C.	.....	.....	30.01	762.2	56	13.3	87	SW	13	5.8	.....	.....	10ks	.....	SW	0	0	Cloudy.....	
Springfield, Mass.	.....	.....	29.85	758.1	26	— 3.3	75	Calm	0	0	.....	.....	10s	.....	.....	0.73	18.5	Cloudy.....	
St. Louis, Mo.	.....	.....	30.21	767.3	10	—12.2	79	NW	16	7.2	.....	.....	10s	.....	.....	0.37	9.4	Cloudy.....	
St. Marks, Fla.	.....	.....	30.07	763.8	61	16.1	100	S	4	1.8	.....	.....	Fog	.....	.....	0	0	Foggy	
St. Paul, Minn.	.....	.....	30.17	766.3	—10	—23.3	77	Calm	0	0	.....	.....	10s	.....	.....	0	0	Cloudy.....	
St. Paul's Island, Alaska	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Thatcher's Island, Mass.	.....	.....	29.02	752.3	28	— 2.2	77	N	16	7.2	.....	.....	10s	.....	N	0.86	21.8	Cloudy.....	
Toledo, Ohio	.....	.....	29.95	760.7	23	— 5.0	73	N	6	2.7	.....	2k	2ks	NW	NW	0.49	12.4	Fair	
Tucson, Arizona	27.59	700.8	30.14	765.5	33	0.6	.....	SE	.....	.....	.....	0	2ks	.....	W	0	0	Clearing.....	
Tybee Island, Ga.	.....	.....	30.04	763.0	56	13.3	100	S	8	3.6	.....	5cs	Fog	SW	.....	0	0	Foggy	
Vicksburg, Miss.	.....	.....	30.21	767.3	37	2.8	76	N	12	5.4	.....	.....	10s	.....	.....	0.08	2.0	Cloudy.....	
Virginia City, M. T.	23.68	601.5	29.76	740.7	22	— 5.6	79	SW	4	1.8	.....	.....	10n	.....	N	Inap.	Inap.	Light snow..	
Washington, D. C.	.....	.....	29.74	755.4	37	2.8	100	SW	1	0.4	.....	.....	Fog	.....	.....	0.21	5.3	Dense fog....	
Wilmington, N. C.	.....	.....	29.98	761.5	62	16.7	77	SW	16	7.2	.....	10cs	0	W	.....	0.78	19.8	Cloudy.....	

UNITED STATES SERIES.—CONTINUED.

STATIONS.	BAROMETER. Corrected for instrum'tal error and temperature. Inches.	BAROMETER. Corrected for instrum'tal error and temperature. Millimeters.	BAROMETER. Reduced to sea-level. Inches.	BAROMETER. Reduced to sea-level. Millimeters.	TEMPERATURE OF THE AIR. Fahrenheit.	TEMPERATURE OF THE AIR. Centigrade.	RELATIVE HUMIDITY. Per cent.	WIND. Direction. From—	WIND. Velocity. Miles per hour.	WIND. Velocity. Meters per second.	WIND. Force. 0—10.	CLOUDS. Amount. Up'er 0—10.	CLOUDS. Amount. Low'r 0—10.	CLOUDS. Direction. Upper. From—	CLOUDS. Direction. Lower. From—	RAIN-FALL OR MELTED SNOW IN THE PAST 24 HOURS. Inches.	RAIN-FALL OR MELTED SNOW IN THE PAST 24 HOURS. Millimeters.	WEATHER.	OBSERVER.
Wood's Holl, Mass.	.....	.....	29.61	752.1	32	0.0	89	SE	6	2.7	.....	.....	8ks	.....	SW	0.80	20.3	Cloudy.....	
Yankton, Dakota	28.77	730.7	30.27	768.8	—18	—27.8	67	SE	1	0.4	.....	0	0	.....	.....	0.18	4.6	Clear	
Yuma, Arizona	.....	.....	30.11	764.8	42	5.6	.....	NW	.....	.....	.....	0	0	.....	.....	0	0	Clear.....	
SUB-SERIES.																			
Kingston, Jamaica, W. I.	.....	.....	30.23	767.8	76	24.4	72	N	6	2.7	.....	2c	2s	E	.....	0	0	.....	James Gall.
Navassa, W. I.	.....	.....	.....	.....	78	25.6	.....	E	.....	.....	2	.....	.....	.....	.....	0	0	Clear.....	F. M. Everett.
Clifton, Ja., W. I.	27.28	692.9	30.09	764.3	66	18.9	78	.....	.....	.....	.....	.....	.....	.....	.....	0	0	.....	C. Partridge.
Paramaribo, D. Guiana, S.A	.....	.....	29.99	761.7	80	26.7	82	E	.....	.....	3	4c	4k	E	.....	0.480	12.19	Fair	C. J. Hering.
Batavia, Dutch Guiana, S.A.	30.07	763.7	.....	.....	79 3	26.3	.....	E	.....	.....	.....	.....	.....	.....	.....	0.512	13.00	Rainy.....	Dr. H. Groot.
Medellin, Colombia, S. A.	25.18	639.6	.....	.....	66 5	19.2	80	Calm	.....	.....	0	0	4ks	.....	.....	0	0	Fair	Thomas Herran.
York Factory, B. A.	.....	.....	29.82	757.4	—14.0	—25.6	73	S	4	1.8	.....	.....	10s	.....	.....	0.02	0.5	Snowing.....	J. Fortescue, W. Wood.
Honolulu, Oahu, H. I.	.....	.....	30.00	762.0	72	22.2	95	SE	.....	.....	3	.....	.....	.....	.....	0	0	Clear	Daniel Smith.
Makawao, Maui, H. I.	.....	.....	29.86	758.4	66	18.9	94	Calm	.....	.....	0	0	Fog	.....	.....	0.65	16.5	.....	F. L. Clarke.

NOTE.—The originals give the amount of cloudiness by the scale 0 to 4, except York Factory, Makawao, Medellin and Paramaribo. The elevation of the barometer at Bismarck is 1,677 feet, or 511.1 meters; Cheyenne, 6,057.3 ft., or 1,846.2 m.; Clifton, about 2,892 ft., or 881.5 m.; Denver, 5,135 ft., or 1,565.2 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Florence, 1,550 (?) ft., or 472.5 (?) m.; Makawao, 2,205 ft., or 672.1 m.; Morgantown, 1,027.9 ft., or 313.3 m.; Medellin, 4,876 ft., or 1,486.2 m.; Mt. Washington, 6,285 ft., or 1,915.6 m.; North Platte, 2,846 ft., or 867.4 m.; Omaha, 1,054.6 ft., or 321.4 m.; Pike's Peak, 14,150.7 ft., or 4,313.1 m.; Salt Lake City, 4,362.2 ft., or 1,329.6 m.; Santa Fe, 6,862.2 (?) ft., or 2,091.6 (?) m.; Tucson, 2,513 (?) ft., or 772.1 (?) m.; Virginia City, 5,480 (?) ft., or 1,670.8 (?) m.; Yankton, 1,278 ft., or 389.5 m. The following constants are added in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Denver, 5.22 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fe, 6.54 in.; Tucson, 2.59 in.; Virginia City, 5.48 in. The elevation of Batavia is about 6 feet; the barometric readings need the addition of 0.2 mm. or 0.01 in. for reduction to sea-level.

UNITED STATES NAVAL SERIES.

By authority of the **SECRETARY OF THE NAVY.**

Furnished by the coöperation of the Navy Department, through Commodore Daniel Ammen, U. S. N., Chief of Bureau of Navigation.

STATIONS AND VESSELS.	True course toward—	Hourly rate in knots.	*Barometer as reported.		Temperature of the Air.		Relative Humidity.	Wind.				Clouds.				Rain-fall or melted snow in the past 24 hours.		State of Ocean.	Direction of swell from—	Weather.	Observer.
								Direction.	Velocity		Force.	Amount.		Direction.							
												Up'er	Low'r	Up'er	Low'r						
			Inches.	Millimeters.	Fahrenheit.	Centigrade.	Per cent.	From—	Miles per hour.	Meters per second.	0—10.	0—10.	0—10.	From—	From—	Inches.	Millimeters.				
Naval Academy, Annapolis, Md.			29.33	745.0	37	2.8	94	S			1		10			0.08	2.0			Cloudy	
Naval Hospital, Annapolis, Md.			29.75	755.6	35	1.7	100	S			1		10		S	0.08	2.0			Rain & snow	
Navy Yard, Mare Island, Cal.			30.10	764.5	51	10.6	96	SSW			1		10							Cloudy	
Navy Yard, Norfolk, Va.			29.92†	760.0†	67	19.4		SW			5		9c,ks		E					Squally	
Navy Yard, Pensacola, Fla.			30.06	763.5	64.5	18.1	92	WSW			1		Fog			0	0			Dense fog	
Navy Yard, Portsmouth, N.H.			29.64	752.8	15	— 9.4		NNW			2									Threatening	
Adams, Port Royal, S. C.			30.08	764.0	59	15.0	94	SW			2		9		E					‡D. clouds.	
Ajax, Port Royal, S. C.			30.10	762.0	58	14.4		SSW			1		8		SE					Pleasant	
Canonicus, New Orleans, La.			29.87†	758.7†	55	12.8		N			4		10							Light rain	
Catskill, Port Royal, S. C.			30.06†	763.5†	56	13.3		S			3		6		SW			Moderate.	S	Misty	
Colorado, New York, N. Y.			29.76	755.9	35	1.7		W			1		10			Blank	Blank			Foggy	
Dictator, Port Royal, S. C.			30.10	764.5	56	13.3	94	SSW			0–1		4			0	0			Clear	
Essex, Hampton Roads, Va.			29.82	757.4	56	13.3	100	SSW			3–5		9		NNE					Squally	
Hartford, Hampton Roads, Va.			29.89	759.2	56	13.3		SW			6		10		E	0.60	12.7	Moderate.	SW	Overcast	
Huron, Port Royal, S. C.			30.15	765.8	61	16.1	94	SW			2		7							Hazy	
Lehigh, Port Royal, S. C.			30.25†	768.3	54	12.2	93	SE			1									Dense fog	
Manhattan, Port Royal, S. C.			30.10†	764.5†	56	13.3		S			1		5		NNE			Smooth		‡D. clouds	
Michigan, Erie, Pa.			29.95	760.7	18	— 7.8	92	W			2		10		NE					Cloudy	
Monongahela, Baltimore, Md.			29.73	755.1	37	2.8		N&W			1		0							Dense fog	
New Hampshire, Port Royal, S. C.			30.26	768.6	60	15.6	94	SW			1		8		SW			Smooth		‡D. clouds	
Ossipee, New Orleans, La.			30.14	765.5	58	14.4		NNW			2		10							Drizzling	
Santee, Annapolis, Md.			29.36	745.7†	36	2.2	100	S			1		10							Cloudy	
St. Louis, League Island, Pa.			29.61	752.1	35	1.7		WSW			2		10		ENE	0.595	15.12			Dense fog	
Tallapoosa, Washington, D. C.			29.65	753.1	36	2.2	90	Calm			0		Fog							Foggy	
Wabash, Boston, Mass.			29.69	754.1	20	— 6.7		NW			3		10							Snowing	
Wyoming, Washington, D. C.			30.22†	767.6†	35	1.7		Calm			0		10							Foggy	

* It is not known that the barometer is corrected for temperature, instrumental error or elevation. † Aneroid Barometer. ‡ Detached clouds.

UNITED STATES MARINE SERIES

REPORTED TO THE OFFICE OF THE CHIEF SIGNAL OFFICER OF THE ARMY.

NAMES OF VESSELS.	True course toward—	Hourly rate in knots.	Barometer reduced to sea-level.		Temperature of the Air.		Relative Humidity.	Wind.				Clouds.				State of Ocean.	Direction of swell from—	Weather.	Observer.
								Direction.	Velocity.		Force.	Amount.		Direction.					
												Up'er	Low'r	Upper.	Lower.				
			Inches.	Millimeters.	Fahrenheit.	Centigrade.	Per cent.	From—	Miles per hour.	Meters per second.	0—10.	0—10.	0—10.	From—	From—				

PACIFIC MAIL S. S. CO. MARINE SERIES.

Furnished by the coöperation of ————, President; Williams, Blanchard & Co., Agents.

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NORTH GERMAN LLOYD OF BREMEN MARINE SERIES.

Furnished by the coöperation of A. Schumacher & Co., Agents.

Steamer Nürnberg. N. 50°, 3′, W. 24°, 48′	W		29.56	750.8	41.0	5.0		WSW			8		k		WSW	Long swells		Cloudy	Capt. A. Jaeger.

MARINE SERIES. (Miscellaneous.)

Furnished by the coöperation of Captain James Jorgensen.

Schooner Addie Fuller, N. 36°, 28′, W. 74°, 25′	SSE	2	29.83	757.7	60	15.6	82	SW	23	10.3		8cs	0	W		Heavy sea		Cloudy	Capt. James Jorgenson.

NOTE.—The schooner Addie Fuller gives the amount of cloudiness by the scale 0 to 4.

COLLATED AT THE OFFICE OF THE CHIEF SIGNAL OFFICER OF THE ARMY, WASHINGTON, D. C.

The records which appear in this Bulletin are copied from the regular exchanges of this office, made in each instance in compliance with an especial request and are published for the uses of the coöperating observers. The barometric readings in the first two columns are reduced to freezing and their respective standards; those in the second two also to mean sea-level. The "weather" is generally published as given.

When the distinction between the upper and lower strata of clouds is not reported, the *kinds* or *types*, viz: cirrus, cumulus, stratus, nimbus, scud, fracto, pallio, haze, fog and smoke, as indicated, respectively, by the letters c, k, s, n, d, f, p, hz., fg. and sm'e, are generally published with the amount in the lower-cloud column. The distinction between the upper and lower strata is carefully made in the United States Series and a portion of the Canadian Series, and the types are indicated by the above letters or their combinations in the proper column.

Albert J. Myer

Brig. Gen. (Bvt., Assg^d.,) Chief Signal Officer, U. S. A.

BULLETIN

OF

INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON JANUARY 17, 1877.

7:35 A. M. WASHINGTON mean time.

6:7 A. M. MEXICO mean time.
7:7 A. M. SAN JOSE mean time.
0:6 P. M. LISBON mean time.
0:28 P. M. MADRID mean time.
0:43 P. M. GREENWICH mean time.
0:53 P. M. PARIS mean time.
1:1 P. M. BRUSSELS mean time.
1:4 P. M. UTRECHT mean time.
1:13 P. M. BERNE mean time.
1:26 P. M. CHRISTIANIA mean time.
1:33 P. M. COPENHAGEN mean time.
1:33 P. M. ROME mean time.
1:37 P. M. BERLIN mean time.
1:49 P. M. VIENNA mean time.
1:55 P. M. STOCKHOLM mean time.
2:18 P. M. ATHENS mean time.
2:39 P. M. CONSTANTINOPLE mean time.
2:44 P. M. ST. PETERSBURG mean time.

ALGERIAN SERIES.

Furnished by the coöperation of General d'Eudeville, Commandant Supérieur du Génie in Algeria.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Nemours			30.27	768.8	61.7	16.5	50	Calm			0		2			0.043	1.1	Clear	Charnot.
Algiers			30.24	768.2	55.0	12.8		NW			2		4			0	0	Fair	Peter.
La Calle			30.08	763.9	56.1	13.4	64	E			2		3			0.236	6.0	Fair	Fleury.
Tunis			30.10	764.5															Jacques.
Sfax																			
Saida			30.23	767.8	46.8	8.2	70	N			1		2			0	0	Clear	Millot.
Tebessa			30.10	764.5	37.8	3.2		NW			3		10			0.236	6.0	Hidden	Bourgeois.
Geriville			30.21	767.3	39.2	4.0	67	NNW			1		2			0	0	Clear	Lemalliot.
Laghouat			30.16	766.0	49.1	9.5	48	N			1		2			0	0	Clear	Guyot.
Biskra			30.10	764.6	60.6	15.9	52	NW			4		5			0	0	Fair	Kuntz.

NOTE.—In the originals the distinction between the amount of upper and lower clouds is apparently not made. The weather is published as given. The rain-fall is measured at 7 a. m., local time.

AUSTRIAN SERIES.

Furnished by the co operation of Professor Ferdinand Osnaghi, Director of the Imperial and Royal Central Meteorological Institute at Vienna.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Agram			30.26	768.6	39.2	4.0	78	NE			3		10			0	0		Prof. Ivan Stoxir.
Cracow, I. R. Observatory			30.32	770.2	31.8	— 0.1	94	NE			1		10			0	0		Dr. Wierzbiski.
Eperies			30.27	768.8	32.4	0.2	78	N			1		5c,8		S	0	0		Julius Mikolik.
Gratz	8.98	730.2	30.28	769.2	38.8	3.8	69	S			3		6			0	0		Andreas Rospini.
Hermannstadt	8.73	720.8	30.23	767.7	34.5	1.4	93	E			1		10			0.124	3.15		Prof. Reissenberger
Kremsmünster	8.84	732.4	30.24	768.2	32.7	0.4	92	ENE			2		10			0	0		Prof. C. Wagner.
Lemberg			30.30	769.6	28.9	— 4.5	90	NE			1		10			0	0		Dr. T. Stanecki.
Nyiregyhaza																			Habasuda Daniel.
Pola			30.12	765.0	47.1	8.4	61	ENE			5		18			0	0		I.R.Hydrographic Office.
Szegedin			30.25	768.4	34.2	1.2	87	E			2		10			0	0		Karl Stancel.
Trieste			30.17	766.2	45.1	7.3	54	ENE			4		0			0	0	Clear	Prof. V. Farolfi.
Vienna			30.29	769.3	38.1	3.4	70	N			1		9			0.12	0.3		I. R. Central Met. Obs'y.

NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 7 p. m., local time. The elevation of Gratz is 343.5 meters, or 1,126.9 feet; Hermannstadt, 407.8 meters, or 1,337.9 feet; Kremsmünster, 383.6 meters, or 1,258.5 feet.

BELGIAN SERIES.

Furnished by the coöperation of J. C. Houzeau, Director of the Royal Observatory at Brussels.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Arlon			30.25	768.3	29.8	— 1.2	100?	SW			2		10			0.028	0.7		
Brussels			30.08	763.9	43.0	6.1	65	S			4	8c	2s	WSW		0	0		Royal Observatory.
Furnes																			
Maeseyck			30.13	765.2	40.8	4.9	71	S			2		3			0	0		

NOTE.—In the originals, the weather is occasionally given in general notes.

BRITISH SERIES

Furnished by the coöperation of Robert H. Scott, Esq., Director of the Meteorological Office, London, Alexander Buchan, Secretary of the Scottish Meteorological Society, Edinburgh, and the respective Observers.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Aberdeen			29.62	752.3	42.6	5.6		SSW	11	4.9			3			0.05	1.40	Blue sky	William Boswell.
Ardrossan			29.63	752.6	45	7.2		SSE			3		7					*D. clouds	William McNeil.
Armagh, Observatory			29.65	753.1	42.3	5.7		SW	9	4.0			10					Raining	S. Call, for Dr. Robinson.
Birr Castle, (Parsonstown)			29.68	753.9	44.7	7.1		SW			1		8					*D. clouds	J. Dreyer.
Bradford			29.67	753.6	46.2	7.9		NW			0		10			0.02	0.5	Overcast	J. McLandsborough.
Bridgetown, (Barbados)			30.04	763.0	83	28.3		NE			2		6					*D. clouds	Sergt. J. F. Halanen, A.
Cambridge, Observatory			29.79	756.7	51.6	10.6		S			3		10					Overcast	H. Todd. [H. C.
Cardington			29.78	756.4	51.6	10.6		SSW			3		10					Raining	John McLaren.
Carlisle																			T. Bell, for J. Cartmell.
Chatham, School M. E.			29.85	758.2	50.6	10.0		SW			2		10					Drizzling	Maj. C. N. Martin, R.E.
Dartmoor	28.33	719.6	29.86	758.4	43.4	6.3		SW			2		10					Gloomy	R. E. Power.
Davos Platz, (Switzerland)	24.85	631.2			28.0	— 2.2	46	Calm			0		0			0	0	Blue sky	Francis Redford, M. A.
Donaghadee			29.61	752.1	44	6.7		SSW			3		10					Raining	J. Mac Gowan.
Dover			29.91	759.7	49	9.4		SW			5		9					Overcast	J. Costello.
Eccles, (near Manchester)			29.71	754.6	43.9	6.6		SW	1.2	0.5			10					Gloomy	Thomas Mackereth.
Falmouth, Observatory			29.80	756.9	47.8	8.8		SW			2		8					Overcast	The Staff.
Fort Napier, (Natal)	27.65	702.3	29.89	759.2	73.3	22.9		E			2		10					Overcast	Pvt. G. Salmon, A. H. C
Free Town, (Sierra Leone)			29.91	759.7	86	30.0		N			1		3					*D. clouds	
Galway, Queen's College			29.61	752.1	44	6.7		W			1		2					*D. clouds	Prof. A. H. Curtis.
Gibraltar, (Mediterranean)			30.24	768.1	61.6	16.1		NW			1		4					*D. clouds	Corpl. C. Aitken, A.H.C.
Glasgow, Observatory			29.62	752.3	40.8	4.9		S			1		6					*D. clouds	Lewis Stuart.
Great Yarmouth			29.86	758.4	48	8.9		SSW			4		7					Misty	G. T. Watson.
Greenwich, Royal Obs'y			29.83	757.7	50.4	10.2		SSW			3		10					Raining	The Staff, for G. B. Airy.
Guernsey			29.80	756.9	50	10.0		SSW			3		10					Raining	Dr. S. E. Hoskins.
Helston			29.83	757.7	51	10.6		SW			4		6ck			0.20	6.6	Fair	M. P. Moyle.
Holyhead			29.69	754.1	47	8.3		S			3		10					Raining	John Tilston.
Kew, Observatory			29.82	757.4	50.2	10.1		S	20	8.9			10					Overcast	The Staff.
Kingstown			29.67	753.6	46	7.8		S			1		9					Overcast	George Mitchell.
Leicester Museum			29.72	754.9	49.5	9.9		SW			4		10					Drizzling	Wm. J. Harrison, F.G.S.
Malta, (Mediterranean)			29.96	761.0	59.2	15.1		SW			3		4k					*D. clouds	Corp'l. P. Bravis, A.H.C.
Nairn			29.55	750.6	44	6.7		SSW			2		0					Clear	W. D. Penny.
Nassau, (Bahamas)			30.28	769.1	77.7	25.3		NE			2		1					Blue sky	Surg. Maj. Henry.
Nottingham, Observatory			29.73	755.1	47.7	8.7		WSW			2		10d		WSW	0.090	2.44	Raining	F. J. Lowe, F. R. S.
Oscott, St. Mary's College			29.74	755.4	44.7	7.1		W			2		9			Blank	Blank	Foggy	Rev. Stephen Whitty.
Oxford, Radcliffe Obs'y			29.76	755.9	50	10.0		SW			1		10					Raining	J. Lucas.
Plymouth			29.80	756.9	48.8	9.3		SW			1		10					Overcast	John Merrifield.
Roche's Point			29.71	754.6	44	6.7		W			4		8					Showery	W. Kennedy.
Saint Ann's Head			29.73	755.1	48	8.9		SSW			2		7					*D. clouds	John C. Walker.
Saint Helier, (Jersey)			29.82	757.4	51.0	10.6		S			4		10					Raining	A. P. Amy.
Sandwick Manse, (Orkneys)			29.55	750.6	40.5	4.7		SE	16	7.2			10					Misty	Rev. C. Clouston, LL. D.
Scarborough																			F. Shaw.
Scutari Cemetery, (Turkey)			30.15	765.8	43.8	6.6		NE			2		10			Blank	Blank	Misty	Sergt. W. H. Lyne.
Sheffield			29.70	754.4	49.1	9.5		SW			1		9			0	0	Overcast	W. F. Cooper.
Silloth Rectory			29.66	753.4	43.8	8.2	88	SW			5		4			0.010	0.25	*D. clouds	Francis Abbott, F.R.A.S.
Stonyhurst, Observatory			29.71	754.6	43.1	6.2		SW			0		10					Raining	Rev. Francis Redford
Stornoway, Lews C., (Hebr.)			29.39	746.5	45	7.2		SSW			7		10					Raining	Rev. S. J. Perry.
Stratfield Turgiss			29.81	757.2	51.2	10.7		S			1		10					Raining	John Smith.
Thurso			29.53	750.0	41	5.0		SSE			2		10					Raining	Rev. Charles H. Griffith
Truro, Royal Institution			29.84	757.9	52	11.1		W			4		10					Overcast	John Trotter.
Valencia, Observatory			29.72	754.9	46.4	8.0		W	21	9.4			7					Raining	W. Newcombe.
Sub-Series.																		*D. clouds	The Staff.
Calf of Man, (Isle of Man)					43	6.1		SW			3		0			0.15	3.8		Henry Mercer.
Cape Good Hope, Obs'y			29.97	761.2	79.0	26.1	54	SSE	31	13.9		0	1						The Staff, for E. J. Stone.
Hobart Town, (Tasmania)			29.71	754.6	70.0	21.1	94	Calm			0		10ku			0	0	Cloudy	Francis Abbott, F.R.A.S.
Leith, Restalrig Park			29.66	753.4	42.1	5.6		SW			1		7cs			0.13	3.3	Fine, hazy	Andrew Gibb.
Mauritius, Observatory			29.99	761.7	85.3	29.6	55	ENE	10.0	4.5		1	6		N	0	0	*D. clouds	C. Meldrum.
Melbourne, Observatory			29.83	757.7	56.0	13 3	72	SE	6	2.7			1			0.02	0.5	Very fine	R. L. J. Ellery.
Monach L't-house, (Hebrides)			29.44	747.8	44	6.7		SSW			6	5	5	SW		0.3	7.6		J. Youngclause.
North Unst, (Shetland Is.)			29.58	751.3	42	5.6		S			4	7	5	SSE					Robert Burnet.

Note.—Generally, the originals do not give the relative humidity, rain-fall, or distinction between upper and lower clouds. The originals give the wind direction to 32 points and weather by the Beaufort notation. The originals give the barometer for Aberdeen, Cardington, Galway, Oxford, St. Heller, Sandwick, Scarborough, Stonyhurst, Leith, Monach and North Unst as read off and the cloudiness for Stornoway by the scale 0 to 4. The wind-force is given by the scale 0 to 12 in the official series; 0 to 6 in the sub-series; except in lbs. per square foot for Greenwich and Hobart Town. The rain-fall is measured at Aberdeen at 10 a. m.; Bradford, 9 a. m.; Hobart Town, 7:30 a. m.; Nottingham, 6 p. m.; Mauritius, 9 a. m., local time. The elevation of Dartmoor is 1,400 feet, or 426.7 meters; Davos Platz, 5,1052 feet, or 1,556.02 meters; Fort Napier, 2,200 feet, or 670.6 meters. *Detached clouds.

By authority of the Minister of Foreign Affairs.

COSTA RICA SERIES.

Furnished by the coöperation of Senor Federico Maison, Director of the Central Office of Statistics and Meteorology.

San José																			

DANISH SERIES.

Furnished by the coöperation of Captain N. Hoffmeyer, Director of the Royal Danish Meteorological Institute at Copenhagen.

Copenhagen			30.18	766.5	35.2	1.8	93	SSE			2		2						
Fanöe			30.05	763.2	37.2	2.9	90	S			4		9						
Godthaab, (Greenland)			29.04	737.7	1.6	-15.2	77	ENE			6		10						
Stykkisholm, (Iceland)			28.60	726.4	31.5	— 0.3	92	S			4		10					Snowing	
Thorshavn, (Faröe)			29.34	745.1	41.4	5.2	84	S			4		10					Raining	
Vestervig			29.99	761.7	35.6	2.0	96	S			6		10						

Note.—The originals give the wind-force by the scale 0 to 6; occasionally, weather by Vienna symbols; no distinction between the amount of upper and lower clouds.

FRENCH SERIES.

Furnished by the cooperation of His Excellency, U. J. Le Verrier, Director of the Paris Observatory, and the respective Observers.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Alengon	.....	.....	30.01	762.2	46.4	8	94	SSW	.....	.....	2	.....	10	.....	.....	0.12	3.	Covered	Normal School.
Amiens	.....	.....	30.03	762.7	45.0	7.2	94	ENE	.....	.....	4	.....	8	.....	W	0	0	Very cloudy	Normal School.
Avignon	.....	.....	30.18	766.5	47.[illegible]	8.[illegible]	67	N	.....	.....	2	.....	0	.....	.....	0	0	Very clear...	Normal School.
Bar-sur-Seine	.....	.....	30.18	766.5	39.[illegible]	4.1	70	S	.....	.....	1	5c	.....	.....	.....	0	0	Cloudy.....	C. Saillard.
Beaumette, (near Angers)	.....	.....	30.01	762.2	48.9	9.4	97	S	30.0	13.4	.....	.....	.....	.....	SSW	0.106	2.7	.....	Beaumette Observ'tory.
Beauvais	.....	.....	30.06	763.5	45.0	7.2	81	SSE	.....	.....	1	.....	10	.....	SSW	0	0	Covered	Normal School.
Besançon	.....	.....	30.26	768 7	36.0	2.2	79	SW	.....	.....	2	.....	0	.....	.....	0	0	Clear	Normal School.
Bourg en Bresse	.....	.....	30.27	768.8	35.6	2.1	66	S	.....	.....	1	2c	.....	N	.....	0	0	Slightly cl'dy	Normal School.
Bourges	.....	.....	30.10	764.4	42.4	5.8	82	SE	.....	.....	2	.....	1	.....	SE	0	0	Clear.....	Normal School.
Brest	.....	.....	29.81	757.2	54.1	12.3	80	W	.....	.....	3	.....	5	.....	W	0.059	1.50	Squally.....	Naval Observatory.
Carcassonne	.....	.....	[illegible].3	765.2	50.[illegible]	10.[illegible]	63	W	.....	.....	1	.....	2	.....	E	0	0	Slightly cl'dy	Normal School.
Caen	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Chartres	.....	.....	30.03	763.9	43.7	6.5	97	SSW	.....	.....	4	.....	9	.....	NE	0	0	.....	Normal School.
Châlons-sur-Marne	.....	.....	30.18	766.6	38.1	3.[illegible]	76	SSW	.....	.....	3	5c	.....	NNE	.....	0	0	Cloudy.....	Normal School.
Clermont	.....	.....	30. 9	766.8	39.2	4.0	73	S	.....	.....	1	.....	2	.....	.....	0	0	Slightly cl'dy	Puy de Dome Obs'y.
Commercy	.....	.....	30.21	767.4	32.0	0	100	W	.....	.....	2	.....	2cs	.....	W	0	0	Slightly cl'dy	Normal School.
Commune de Gréasque*	.....	.....	30.18	766.6	52.[illegible]	11.3	44	S	.....	.....	4	.....	2	.....	S	0	0	.....	M. Kina.
Grenoble	.....	.....	30.27	768.8	35.[illegible]	2.1	67	NE	.....	.....	1	.....	0	.....	.....	0	0	Clear.....	Normal School.
La Roche-sur-Yon	.....	.....	30.02	762.6	48.2	9.0	100	SE	.....	.....	2	.....	10	.....	.....	0.370	9.4	Covered	Normal School.
Le Mans	.....	.....	30.01	762.3	47.5	8.6	94	SW	.....	.....	3	.....	10	.....	.....	0.16	4.	Covered	Normal School.
Lons-Le-Saunier	.....	.....	30.22	767.6	31.[illegible]	— 0.5	88	NNW	.....	.....	1	.....	10	.....	.....	0	0	Foggy	Normal School.
Lorient	.....	.....	29.90	759.4	53.2	11.8	76	W	.....	.....	4	.....	5	.....	WSW	0.252	6.4	Cloudy.....	Naval Observatory.
Mâcon	.....	.....	30.25	768.3	31.[illegible]	— 0.4	.....	NNW	.....	.....	1	.....	.....	.....	.....	0	0	Foggy	Normal School.
Metz	.....	.....	30.27	768.9	28.9	— 1.7	89	W	.....	.....	3	.....	10	.....	.....	0	0	Foggy	M. Schuster.
Mirecourt	.....	.....	30.21	767.4	34.0	1.1	92	W	.....	.....	2	.....	8	.....	NE	0	0	Almost cov'd	Normal School.
Nismes	.....	.....	30.21	767.3	46.[illegible]	8	83	N	.....	.....	4	.....	0	.....	.....	0	0	Clear	Normal School.
Orleans	.....	.....	30.08	764.1	46.4	8	81	S	.....	.....	2	.....	5	.....	SSW	0	0	Cloudy.....	Normal School.
Paris, Observatory	.....	.....	30.08	764.1	44.6	7.0	77	S	.....	.....	2	.....	10	.....	.....	0	0	Covered	National Observatory.
Parthenay	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Privas	.....	.....	30.21	767.4	41.7	5.4	.....	NNE	.....	.....	2	.....	1	.....	NNE	0	0	Clear	Normal School.
Rochefort, Observatory	.....	.....	30.09	764.3	50.0	10.0	89	S	.....	.....	3	.....	10	.....	N	0.39	10.0	Covered	Naval Observatory.
Rouen	.....	.....	29.97	761.3	48.4	9.1	84	SE	.....	.....	2	.....	10	.....	.....	0.01	0.3	Covered	Normal School.
Saint Lo	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Tarbes	28.99	736.3	30.09	764.2	50.0	10	86	W	.....	.....	2	.....	2	.....	E	0	0	Slightly cl'dy	Normal School.
Villefranche	.....	.....	30.23	767.8	40.3	4.6	92	SE	.....	.....	1	.....	5	.....	.....	0	0	Cloudy.....	Normal School.
Sub-Series.																			
Fort de France, Martinique	.....	.....	29.95	760.7	82.4	28	.....	S	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	L'Abbé Marchési.
Marseilles	.....	.....	30.14	765.5	54.9	12.7	64	S	.....	.....	1	.....	1	.....	.....	0	0	Partly cl'dy.	Marseilles Observatory.
Mont-Louis	24.89	632.3	30.21	767.3	34.5	1.4	38	SW	11.[illegible]	5.00	.....	.....	8	.....	NW	0	0	.....	—, Falguère.
Montsouris, Paris	.....	.....	30.07	763.6	44.4	6.9	84	SSE	.....	.....	3	.....	10	.....	SSW	0	0	.....	Montsouris Observatory
Perpignan	.....	.....	30.19	766.7	47.8	8.8	64	SE	5.6	2.50	.....	.....	9	.....	.....	0	0	.....	Dr. Fines.
Pic du Midi, (Summit,) H. P.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. Baylac.
Pic du Midi, (Plantade,) H. P.	22.48	571.0	.....	.....	34.2	1.2	.....	W	.....	.....	1	.....	5	.....	.....	0	0	Fair	General de Nansouty.
Saint Maur, (near Paris)	.....	.....	30.08	763.9	45.7	7.6	75	SE	.....	.....	2	.....	10	.....	.....	0	0	Covered	E. Renou.
Toulouse	.....	.....	30.19	766.9	41.0	5.0	100	ESE	.....	.....	1	.....	6	.....	.....	0.02[illegible]	0.6	Foggy	Toulouse Observatory.
Tours	.....	.....	30.06	763.4	49.6	9.8	80	SSW	.....	.....	2	.....	9	.....	SSW	0.031	0.8	.....	C. Marquet.
Versailles, (near Paris)	.....	.....	30.06	763.4	47.1	8.4	81	SW	.....	.....	3	.....	10	.....	.....	0.00[illegible]	0.12	Covered	Dr. A. Bérigny.
Zi-K a-Wei, (near Shanghai)	.....	.....	30.38	771.7	36.5	2.5	91	NNE	1.9	0.83	.....	.....	10	.....	.....	Inap.	Inap.	Rain & snow	Marc Dechevrens, S. J.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—Generally, the originals give the wind-force by the scale 0 to 7; no distinction between upper and lower clouds, and, in the official series, the amount by the scale 0 to 4; the rain-fall as measured at 7, 8 or 9 a. m., local time; at Clermont, 9 a. m. of the following day; the weather in general terms as published. The elevation of Clermont is 388 meters, or 1,272.9 feet; Commune de Gréasque, 322 meters, or 1,056.4 feet; Tarbes, 308 meters, or 1,010 feet; Mont-Louis, 1,388.40 meters, or 5,304.8 feet; Pic du Midi, (Summit,) 2,877 meters, or 9,439.1 feet; Pic du Midi, Plantade,) 2,366 meters, or 7,762.6 feet. In correcting the Mont-Louis barometric observations for altitude, the constant 135. millimeters has been added. *Bouches-du-Rhône

GERMAN SERIES.

Furnished by the cooperation of Professor Dr. G. Neumayer, Director of the German Naval Observatory, Hamburg.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Bamberg	.....	.....	30.28	769.0	36.0	2.2	68	WSW	.....	.....	3	.....	10	SW	.....	0	0	.....	Prof. T. Hoh.
Berlin	.....	.....	30.29	769.3	39.7	4.3	76	S	.....	.....	1	.....	2	.....	.....	0	0	.....	Prof. Arndt.
Breslau	.....	.....	30.31	769.9	37.4	3.0	81	W	.....	.....	1	.....	9	.....	.....	0.008	0.2	.....	Royal University Obs'y.
Carlsruhe	.....	.....	30.24	768.0	30.2	— 1.0	96	S	.....	.....	1	.....	10	.....	.....	0	0	Foggy	A. Senz.
Cassel	.....	.....	30.27	768.8	35.4	1.9	81	SSE	.....	.....	3	.....	10	SSW	.....	0	0	.....	Dr. H. Möhl.
Crefeld	.....	.....	30.12	765.0	39.7	4.3	76	SE	.....	.....	3	.....	4	.....	.....	0	0	.....	Director Lose.
Emden	.....	.....	30.28	769.2	40.8	4.9	78	S	.....	.....	3	.....	2	.....	.....	0	0	.....	Prof. Prestel.
Frankfort on the Main	.....	.....	30.30	769.6	32.9	0.5	84	S	.....	.....	1	.....	10	.....	.....	0	0	.....	Physical Society.
Friedrichshafen	28.7[illegible]	730.5	30.26	768.7	34.0	1.6	73	WSW	.....	.....	2	.....	10	.....	.....	0	0	.....	M. Wilhelm.
Hamburg	.....	.....	30.18	766.6	38.6	3.8	80	SSE	.....	.....	3	.....	1	.....	.....	Inap.	Inap.	Clear	Captain F. Hegemann.
Kiel	.....	.....	30.15	765.8	36.7	2.6	77	SW	.....	.....	2	.....	3	.....	.....	0	0	.....	Prof. G. Karsten.
Königsberg, (Prussia)	.....	.....	30.31	769.9	26.1	— 3.3	90	SE	.....	.....	2	.....	10	.....	.....	0	0	.....	Prof. E. Luther.
Koslin	.....	.....	30.29	769.3	34.3	1.3	.....	S	.....	.....	1	.....	10	.....	.....	0.039	1.0	.....	H. Müller.
Leipsic	.....	.....	30.29	769.3	36.3	2.4	80	S	.....	.....	2	.....	2	.....	.....	0	0	.....	Prof. Bruhns.
Memel	.....	.....	30.34	770.6	23.4	— 4.8	90	SE	.....	.....	3	.....	10ks, fg	.....	.....	.....	.....	Light snow..	Reinbrecht & Skalweit.
Münster	.....	.....	30.23	767.9	43.3	6.3	71	SE	.....	.....	1	.....	3	.....	.....	0	0	.....	Prof. E. Heis.
Neufahrwasser	.....	.....	30.28	769.2	33.8	1.0	89	S	.....	.....	1	.....	10	.....	.....	0.004	0.1	Foggy	A Lothe.
Posen	.....	.....	30.29	769.4	38.3	3.5	91	SW	.....	.....	2	.....	9	.....	.....	0	0	.....	Dr. Magenar.
Strassburg, (in Alsace)	.....	.....	30.28	769.1	29.1	— 1.6	98	Calm	.....	.....	0	.....	10	.....	.....	Inap.	Inap.	.....	Dr. Schur.
Stuttgart	.....	.....	30.26	768.5	34.3	1.3	73	E	.....	.....	1	.....	10	.....	.....	0	0	.....	Prof. Schoder.
Thorn	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Dr. Hasenbalg.
Treves, (Trier)	.....	.....	30.15	765.9	32.0	0.0	95	SW	.....	.....	1	.....	10	.....	.....	0	0	Dense fog....	Prof. Flesch.
Weissenburg, (Bavaria)	28.70	728.9	30.29	769.3	31.3	— 0.4	81	SE	.....	.....	1	.....	10	SE	.....	0.047	1.2	.....	Dr. von Bebber.
Wustrow, Naval School	.....	.....	30.25	768.3	37.2	2.9	81	SSE	.....	.....	3	.....	5	.....	.....	0	0	.....	E. F. Schütz.
German Naval Series.																			
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—The elevation of Friedrichshafen is 413.4 meters, or 1,356.3 feet; Weissenburg, 431 meters, or 1,414.0 ft. In the originals the distinction between the amount of upper and lower clouds is not made. It is not always certain that the remarks in the weather column refer to the moment of observation.

GREEK SERIES.

Furnished by the coöperation of Professor Dr. J. F. Julius Schmidt, Director of the Royal Observatory at Athens.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Athens			29.94	760.4	55 2	12.9		W										Cloudy	

Note.—The originals give the barometer corrected, but not reduced to sea-level; occasionally the kind of clouds; the weather as published. They omit the humidity wind-force, amount of cloudiness and rain-fall.

ITALIAN SERIES.

Furnished by the cooperation of His Excellency the Minister of Agriculture, Industry and Commerce, and the respective Observers.

Udine			30.17	766.4	46.9	8.3	44	SE	8.1	3.6		0				0	0		Prof. Giovanni Godig
Stelvio	22.07	560.5			16.7	— 8.5		SE			1	0				0	0		Signora Ernesta Manfredi.
Valdobbia	22 09	561.1			19.2	— 7.1	69	WNW			1	0				0	0		Ab. Dom. Mongini.
Padua			30.16	766.1	47.3	8.5	45	NE	8.1	3.6		0				0	0		Prof. Dott. Lorenzoni.
Vicenza			30.17	766.4	45.9	7.7	56	SE	2.5	1.1		1				0	0		Conte Alm. Da Schio.
Verona			30.13	765.4	47.1	8.4	63	E			1	0				0	0		Dott. B. Bertoncelli.
Bergamo	28.81	731.8	30.17	766.3	44.6	7.0	57	WSW			2	3				0	0		Prof Trionfini Carlo.
Domodossola			30.19	766.8	43.2	6.2	45	SW			4	0				0	0		Prof. Giuseppe Colza.
Milan			30.23	767.9	41.2	5.1	87	ENE			1	2				0	0		Ab. Gio. Capelli.
Pavia			30.21	767.2	41.0	5.0	70	NE			1	0				0	0		Prof. Gio. Cantoni.
Moncalieri			30.22	767.5	41.4	5.2	75	ESE	3.1	1.4		0				0	0		Prof. P. F. Denza.
Mondovi	28.23	717.0	30.21	767.3	39.2	4.0	52	N			2	0				0	0		Prof. D. C. Bruno.
Porto Maurizio			30.17	766.2	53.8	12.1	34	E			4	0				0	0		Prof. L. Vassallo.
Genoa			30.15	765.7	53.4	11.9	34	N	4.3	1.9		0				0	0		Prof. G. M. Garibaldi.
Piacenza			30.21	767.3	40.1	4.5	72	N	0.7	0.3		0				0	0		Dott. G. Manzi.
Parma			30.20	767.0	45.7	7.6	68	E			2	1				0	0		Prof. P. Pigorini.
Florence			30.14	765.5	48.7	9.3	96	NE			6	2				0	0		Cav. F. Meucci.
Leghorn			30.13	765.4	50.2	10.1		ENE	10.7	4.7		0				0	0		Prof. P. Monte.
Siena	28.86	733.1	30.10	764.6	46.6	8.1	62	SSE	6.3	2.8		6		N		0	0		Prof. L. Toscani.
Urbino	28.53	724.6	30.13	765.4	40.1	4.5	84	N			4	10				0	0		Prof. P. Serpieri.
Pesaro			30.15	765.9	47.3	8.5	69	N	32.3	14.4		10		N		0	0		Prof. Luigi Guidi.
Ancona			30.12	765.1	48.9	9.4	79	NNW			4	5				0	0		Prof. F. De— Bosis.
Grosseto			30.10	764.6	52.3	11.3	49	ENE			6	3		SE		0	0		Avv. P. Ponticelli.
Rome			30.04	763.1	55.0	12.8	46	NNE	3.1	1.4		0				0	0		Prof's. P. Secchi & L. Respighi.
Naples, O. U			30.03	762.7	55.0	12.8	57	ENE			2	4		NE		0	0		Prof. L. Palmieri.
Lecce			30.00	762.1	53.6	12.0	61	NNE	14.3	6.4		3				0	0		Prof. C. De—Giorgi.
Cosenza			30.02	762.4	50.2	10.1	73	WNW	9.4	4.2		7				0	0		Prof. F. D. Conti.
Cagliari																			Prof. A. Pacinotti.
Riposto, (Sicily)			29.93	760.3	56.8	13.8	68	E			2	9		S		0.433	11.0	Raining	Prof. F. Cafiero.
Palermo			29.93	760.3	52.9	11.6	74	WSW	1.8	0.8		10				0.012	0.3	Light rain	Prof. G. Cacciatore.
Caltanissetta	27.96	710.1	29.95	760.7	48.7	9.3	66	NNW			4	5		S		0	0		Prof. A. Pagani.
Siracusa			29.93	760.1	55.9	13.3	59	NNE			1	9		NNE		0.024	0.6	Light rain	Prof. V. Giuliano.
Sub-Series.																			
Naples, S. R.			30.06	763.4	51.6	10.9	53	NE	1.8	0.8		0				0	0		Prof. F. Brioschi

Note.—The originals give the wind-force by the scale 0 to 4, or the velocity in kilometers per hour; generally, no distinction between upper and lower clouds; occasionally the weather by the Vienna symbols. The elevation of Stelvio is 2,543.0 meters, or 8,342.9 feet; Valdobbia, 2,548.0 meters or 8,359.3 feet; Bergamo, 379.6 meters, or 1,245.3 feet; Mondovi, 556 meters, or 1,824.2 feet; Siena, 348.5 meters, or 1,143.3 feet; Urbino, 451 meters, or 1,479.7 feet; Caltanissetta, 570.3 meters, or 1,871.0 feet.

Furnished by the coöperation of the Imperial University of Tokei, Japan.

JAPANESE SERIES.

Tokei			30.15	765.8	30	— 1.1		Calm	0	0		0				0	0		Prof. P. V. Veeder.

Note.—The originals give the amount of cloudiness by the scale 0 to 4 without distinguishing between upper and lower clouds. The rain-fall is measured at 7 a. m., local time

By authority of the Secretary of Public Works.

MEXICAN SERIES.

Furnished by the coöperation of Senor Mariano Barcena, Director of the Central Meteorological Observatory in the City of Mexico.

Mexico																			Mariano Barcena. Vicente Reyes. Miguel Perez. (Engineers in charge.)

Note.—The elevation of Mexico is 2,290 meters, or 7,512.9 feet. The rain-fall is measured at 6 a. m., local time.

NETHERLANDS' SERIES.

Furnished by the coöperation of Professor Buys Ballot, Director of the Royal Meteorological Institute of the Netherlands at Utrecht.

Flushing			30.02	762.6	45.0	7.2		S			5					0	0		
Groningen			30.00	762.0	41.5	5.3		S			4					0	0		
Helder			29.98	761.5	43.5	6.4		S			4					0	0		
Utrecht			30.02	762.6	43.7	6.5	66	SSE			4		10			0.012	0.3	Dull	

Note.—The originals give the wind-pressure in kilograms per square meter; for Utrecht, they give the weather as published, from which the amount of cloudiness is taken by the scale 0 to 4, without distinguishing between upper and lower clouds. It is assumed that the barometer readings have been reduced to sea-level.

NORWEGIAN SERIES.

Furnished by the coöperation of Professor H. Mohn, Director of the Royal Norwegian Meteorological Institute at Christiania.

Bergen			29.74	755.4	45.0	7.2	77	SSE	21.7	9.7			10			0.689	17.5	Raining	
Brönö			29.84	757.8	32.9	0.5	70	SSE	11.2	5			6						
Christiania			30.10	764.6	29.3	— 1.5	92	E	3.6	1.6			10			0.350	9.0	Snowing	
Tromsö			29.89	759.2	27.3	— 2.6	83	NE	0	0			3			0	0		

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols. The cloudiness and weather at Bergen refer to 2h., p. m., local time, instead of 1h., 4 m.

PORTUGUESE SERIES.

Furnished by the coöperation of J. C. de Brito Capello, Director of the Meteorological Observatory of the Infante Don Luiz at Lisbon.

STATIONS.	Barometer. Corrected for instru-m'tal error and temperature. Inches.	Barometer. Corrected for instru-m'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Angra, (Azores)	.....	.....	30.26	768.5	55.0	12.8	79	WSW	8.1	3.6	.....	.....	7	.....	.....	0	0	.....	Dr. J. A. Sampaio.
Campo Major	.....	.....	30.28	769.1	49.1	9.5	89	Calm	0	0	.....	.....	9	WNW	.....	0	0	.....	Dr. A. M. R. dos Santos.
Funchal, (Madeira)	.....	.....	30.35	770.8	61.0	16.1	60	ESE	6.6	2.95	.....	.....	5	.....	.....	0	0	.....	Capt. D. A. de Cunha.
Lisbon	.....	.....	30.32	770.1	54.0	12.2	84	WSW	8.7	3.9	.....	.....	8	NW	.....	0	0	.....	The Observatory.
Ponta Delgada, (Azores)	.....	.....	30.29	769.4	60.1	15.6	79	SW	8.7	3.9	.....	.....	4	.....	.....	0.087	2.2	.....	
.....																			

Note.—The originals give the wind-velocity in kilometers per hour; occasionally, the weather by the Vienna symbols; the amount of cloudiness without distinguishing between upper and lower clouds; the barometer corrected but not reduced to sea-level. The rain-fall at Libson is measured at noon, instead of 0 h. 6 m., p. m.

RUSSIAN SERIES.

Furnished by the cooperation of Professor H. Wild, Director of the Imperial Central Physical Observatory of Russia, at St. Petersburg.

Warsaw	.....	.....	30.32	770.2	27.1	— 2.7	96	ESE	7	3	.....	.....	10	.....	.....	.....	.....	.....	Astronomical Obs.
Wilna	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Astronomical Obs.
Dorpat	.....	.....	30.47	773.9	14.0	—10.0	83	ESE	7	3	.....	.....	7	.....	.....	.....	.....	.....	Physical Cabinet.
St. Petersburg	.....	.....	30.51	775.0	11.1	—11.6	87	SSE	11	5	.....	.....	10	.....	.....	.....	.....	.....	Central Physical Obs.
Kuopio	.....	.....	30.39	772.6	13.3	—10.4	.....	SE	7	3	.....	.....	10	.....	.....	.....	.....	Snowing.....	Ch. Forsten.
Kieff	.....	.....	30.37	771.3	6.1	—14.4	100	N	7	3	.....	.....	10	.....	.....	.....	.....	Snow & fog..	Physical Cabinet.
Nikolaiev	.....	.....	30.27	768.8	20.8	— 6.2	82	NNE	18	8	.....	.....	10	.....	.....	.....	.....	.....	Kurdakof
Kertch	.....	.....	30.19	766.7	31.5	— 0.3	90	NW	11	5	.....	.....	10	.....	.....	.....	.....	.....	Lagorio.
Moscow	.....	.....	30.65	778.6	9.9	—12.3	93	S	9	4	.....	.....	10	.....	.....	.....	.....	.....	Meteorological Obs.
Lugan	.....	.....	30.16	766.0	19.6	— 6.9	86	ENE	18	8	.....	.....	10	.....	.....	Blank	Blan.	.....	Meteorological Obs.
Archangel	.....	.....	30.45	773.3	7.9	—13.4	92	S	13	6	.....	.....	10	.....	.....	.....	.....	.....	Ogorodnikof.
Tiflis	28.76	730.5	30.28	767.7	41.5	5.3	65	S	9	4	.....	.....	10	.....	.....	.....	.....	.....	Physical Observatory.
Astrakhan	.....	.....	30.44	773.2	21.6	— 5.8	80	E	11	5	.....	.....	9	.....	.....	.....	.....	.....	Sebastianof.
Kasan	.....	.....	30.74	780.9	— 9.0	—22.8	87	Calm	0	0	.....	.....	10	.....	.....	.....	.....	.....	Physical Cabinet.
Orenburg	.....	.....	30.56	776.2	—13.2	—25.1	.....	SW	13	6	.....	.....	10	.....	.....	.....	.....	.....	Tschernischef.
Ekaterinburg	29.47	748.5	30.53	775.4	1.6	—16.9	80	WSW	13	6	.....	.....	0	.....	.....	.....	.....	.....	Meteorological Obs.
Nukuss	.....	.....	30.49	774.4	21.2	— 6.0	90	ENE	9	4	.....	.....	1	.....	.....	.....	.....	.....	
Kuyaly	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Bobrof.
Tashkend	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Michelson.
Barnaul	.....	.....	30.44	773.2	— 1.8	—18.5	89	SW	9	4	.....	.....	10	.....	.....	.....	.....	.....	Meteorological Obs.
Yeniseisk	.....	.....	29.72	755.0	— 2.6	—19.2	76	SW	4	2	.....	.....	6	.....	.....	.....	.....	.....	Marks.
Irkutsk	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Usolzef.
Peking, (China)	.....	.....	30.22	767.6	24.6	— 4.1	75	Calm	0	0	.....	.....	2	.....	.....	.....	.....	.....	Physical Observatory.
Nertchinsk	27.88	708.1	30.28	769.1	—22.7	—30.4	93	Calm	0	0	.....	.....	0	.....	.....	.....	.....	.....	Meteorological Obs.
Vladivostock	.....	.....	30.18	766.5	15.8	— 9.0	91	Calm	0	0	.....	.....	0	.....	.....	.....	.....	.....	
Nikolaievsk, on the Amoor	.....	.....	.....	.....	— 6.7	—21.5	.....	Calm	0	0	.....	.....	0	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols; they omit the rain-fall. The elevation of Tiflis is 409 meters, or 1,341.8 feet; Ekaterinburg, 306.4? m., or 1,005.2? ft.; Tashkend, 494.2? m., or 1,621.3? ft.; Irkutsk, 392 m., or 1,286 ft.; Nertchinsk, 592.0? m., or 1,942.2? ft.

SPANISH SERIES.

Furnished by the cooperation of Antonio Aguilar, Director of the Royal Observatory at Madrid, and of Don Cecilio Pujazon, Captain R. N. Director of the Naval Observatory at San Fernando.

Madrid	.....	.....	30.28	769.0	43.2	6.2	83	SE	0.7	0.33	.....	0	9	.....	.....	0	0	Almost cov'd	Royal Observatory.
San Fernando	.....	.....	30.30	769.5	55.2	12.9	67	N	6.5	2.9	.....	1	7	NW	N	.....	.....	.....	Naval Observatory.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

Note.—The originals give the weather in general terms, as published; rain-fall for San Fernando from preceding to following midnight; wind-velocity for Madrid in kilometers per hour.

SWEDISH SERIES.

Furnished by the cooperation of Professor R. Rubenson, Director of the Royal Swedish Meteorological Institute, at Stockholm, and of Dr. H. H. Hildebrandsson, Chief of the Meteorological Division of the Upsala Observatory.

Haparanda	.....	.....	30.32	770.2	18.7	— 7.4	95	S	.....	.....	2	.....	10	.....	.....	0	0	.....	
Umea	.....	.....	30.32	770.1	24.1	— 4.4	100	SE	.....	.....	2	.....	10	.....	.....	0	0	.....	
Hernosand	.....	.....	30.27	768.9	26.8	— 2.9	96	Calm	.....	.....	0	.....	10	.....	.....	0.051	1.8	.....	
Stockholm	.....	.....	30.23	767.7	29.5	— 1.4	96	Calm	.....	.....	0	.....	10	.....	.....	0	0	.....	
Wisby	.....	.....	30.28	769.0	33.8	1.0	92	ENE	.....	.....	4	.....	7	.....	.....	0.048	1.1	.....	
Sub-Series.																			
Upsala	.....	.....	30.23	767.9	28.4	— 2.0	95	E	2.7	1.2	.....	.....	10	.....	.....	0.001	0.02	.....	Dr. Hildebrandsson.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

Note.—The originals give the wind-force by the scale 0 to 6, and Upsala also velocity in meters per second; occasionally, the weather by the Vienna symbols, or in general terms; no distinction between the amount of upper and lower clouds. The rain-fall is measured at 8 a. m., local time.

SWISS SERIES.

Furnished by the coöperation of Professor R. Wolf, Director of the Observatory at Zurich, and of Professor E. Plantamour, Director of the Observatory at Geneva.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Geneva	28.78	730.9	30.26	768.7	33.8	1.0	76	N	.....	.....	1	.....	8	.....	.....	0	0	Cloudy..	The Observatory.
Zurich	28.57	725.7	30.30	769.5	29.8	— 1.2	82	N	.....	.....	1	.....	10	.....	.....	0	0	Covered	The Observatory.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—For Geneva the corresponding departures from the normal values are: Barometer, +3.3 mm; Thermometer, —0.5 cent.; Relative Humidity, —3 per cent.

NOTE.—The rain-fall is measured at Zurich at 7 a. m. on the following day. The originals give the barometer corrected but not reduced to sea-level; the wind-force by the scale 0 to 4 for Zurich; the amount of cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The elevation of Geneva is 408 meters, or 1,339 feet, and that of Zurich 470 meters, or 1,542 feet.

TURKISH SERIES.

Furnished by the coöperation of A. Coumbary, Effendi, Director of the Central Observatory at Constantinople, and of Professor C. V. A. Van Dyck, Superintendent of the Lee Observatory at Beirut.

Constantinople	.....	.....	30.19	766.8	41.7	5.4	88	ENE	15	6.5	.....	.....	10	.....	NE	0	0	.....	
Fao, (Persian Gulf)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Salonica	.....	.....	30.13	765.2	56.7	13.7	.....	NE	.....	.....	2	.....	10	.....	.....	.....	.....	.....	
Valona	.....	.....	29.91	759.8	54.9	12.7	.....	SW	.....	.....	1	.....	2	.....	.....	.....	.....	.....	
Varna	.....	.....	30.35	771.0	32.0	0.0	.....	Calm	.....	.....	0	.....	5	.....	.....	.....	.....	.....	
SUB-SERIES.																			
Beirut, (Syria,) Lee Obs'y	.....	.....	30.14	765.5	64.4	18.0	77	WSW	.....	.....	3	.....	6n	.....	SW	0.24	6.1	*D. clouds.....	Prof. C. V. A. Van Dyck

NOTE.—The originals give the wind-force by the scale 0 to 7, (except Beirut, by the scale 0 to 12, and Constantinople velocity in meters per second;) the weather in general terms as published; no distinction between upper and lower clouds, and, except Constantinople and Beirut, the amount by the scale 0 to 4. It is assumed that the barometer is reduced to sea-level. * Detached clouds.

CANADIAN SERIES.

Furnished by the coöperation of Professor G. T. Kingston, Director of the Magnetic Observatory at Toronto, and Superintendent of the Meteorological Office of the Dominion of Canada, and the respective Observers. Those marked with a star (*) are also telegraphed daily to the office of the Chief Signal Officer, U. S. Army.

Bathurst, N. B	.....	.....	30.45	773.4	—16.5	—26.9	69	Calm	0	0	.....	.....	0	.....	.....	0.20	5.1	.....	Hon. J. Ferguson.
Brockville, Ontario	.....	.....	30.59	777.0	—17	—27.2	.....	Calm	0	0	.....	0	2s	.....	W	0.63	0.8	Fair.....	W. R. Bigg.
*Chatham, N. B	.....	.....	30.47	773.9	—14	—25.6	100	Calm	0	0	.....	2k	Haze	W	.....	0.40	10.2	Hazy.....	G. A. Blair.
Charlottetown, P. E. Island	.....	.....	30.46	773.7	—11	—23.9	76	Calm	0	0	.....	5c	0	.....	.....	0.200	5.08	Fair.....	H. J. Cundall, C. E.
Cornwall, Ontario	.....	.....	30.56	776.2	—12.4	—24.7	100	W	.....	.....	1	0	2s	.....	.....	0	0	Fair.....	James Smith, M. A.
Dalhousie, N. B	.....	.....	30.49	774.4	.....	.....	.....	W	.....	.....	1	.....	.....	.....	.....	0.05	1.3	Clear.....	H. A. Johnson.
Esquimault, B. C	.....	.....	29.54	750.3	38.1	3.4	91	Calm	.....	.....	.....	.....	10n	.....	.....	0	0	Cloudy.....	W. H. Bevis.
Fredericton, N. B	.....	.....	30.63	778.0	— 0.9	—18.3	97	Calm	0	0	.....	.....	10n	.....	.....	0.405	10.29	Fair	Prof. Harrison.
*Fort Garry, Manitoba	.....	.....	30.16	766.1	—12	—24.4	95	NW	13	5.8	.....	.....	10n	.....	.....	0	0	Cloudy.....	James Stewart.
Goderich, Ontario	.....	.....	30.51	774.9	11.6	—11.3	80	SW	.....	.....	1	10k	0	SW	.....	Inap.	Inap.	Dull	H. J. Strang, M. A.
Granton, Ontario	29.28	743.7	30.55	776.0	6.2	—14.3	.....	Calm	.....	.....	0	0	0	.....	.....	0	0	Clear.....	James Grant.
*Halifax, N. S	.....	.....	30.44	773.2	— 1	—18.3	94	N	8	3.6	.....	0	2ks	.....	.....	0.070	1.78	Fair.....	F. Allison, M. A.
Hamilton, Ontario	.....	.....	30.70	779.8	8.7	—12.9	66	SW	.....	.....	1	8ck	0	.....	.....	0	0	Hazy	G. Dickson.
Heart's Content, N. F	.....	.....	30.16	766.1	0	—17.8	100	NW	.....	.....	4	3k	0	NW	.....	0.11	2.8	Fine.....	E. Weedon.
*Kingston, Ontario	.....	.....	30.60	777.2	— 4	—20.0	86	Calm	0	0	.....	.....	10ks	.....	.....	0.02	0.5	Cloudy.....	S. Woods, M. A.
*Montreal, Quebec	.....	.....	30.53	775.4	0	—17.8	91	SW	6	2.7	.....	0	2ks	.....	.....	Inap.	Inap.	Clear.....	C. H. McLeod, C. E.
*Ottawa, Ontario	.....	.....	30.53	775.4	— 8	—22.2	92	NW	2	0.9	.....	.....	Fog	.....	.....	0	0	Foggy	J. B. Haney.
*Parry Sound, Ontario	.....	.....	30.47	773.9	7	—13.9	89	S	5	2.2	.....	.....	10n	.....	S	0.01	0.3	Light snow..	Rev. R. Mosley.
Port Dover, Ontario	.....	.....	30.52	775.2	7	—13.9	100	N	5	2.2	.....	.....	Fog	.....	N	0	0	Foggy.....	H. Morgan.
Port Hastings, N. S	.....	.....	30.40	772.1	— 2.8	—19.3	.....	NW	3	1.3	.....	.....	.....	.....	.....	0	0	Fine.....	Peter Grant.
Port Stanley, Ontario	.....	.....	30.53	775.4	— 3	—19.4	90	E	1	0.4	.....	.....	10ks	.....	W	0	0	Cloudy.....	M. Payne.
*Quebec, Quebec	.....	.....	30.53	775.4	0	—17.8	70	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	Capt. Ashe, R. N.
*Rockliffe, Ontario	.....	.....	30.55	776.0	—12	—24.4	109	E	3	1.3	.....	.....	10s	.....	NW	0	0	Cloudy.....	
St. John, N. B	.....	.....	30.52	775.2	0	—17.8	85	N	1	0.4	.....	.....	10ks	.....	.....	0	0	Overcast.....	G. Murdoch, C. E.
*Saugeen, Ontario	.....	.....	30.45	773.4	13	—10.6	90	S	1	0.4	.....	.....	10ks	.....	.....	0.03	0.8	Cloudy.....	K. Stewart.
Stayner, Ontario	.....	.....	30.56	776.2	1	—17.2	91	Calm	0	0	.....	5cs	0	SW	.....	0	0	Fair	R. J. Cole.
Stratford, Ontario	29.08	738.6	30.56	776.2	— 8.5	—22.5	96	Calm	0	0	.....	.....	Fog	.....	.....	0	0	Foggy.....	C. J. MacGregor, M. A.
*Sydney, C. B	.....	.....	30.40	772.1	— 5	—20.6	100	N	1	0.4	.....	0	0	.....	.....	0.23	5.8	Clear	T. C. Hill.
*Toronto, Ontario	.....	.....	30.55	776.0	— 1	—18.3	100	Calm	0	0	.....	8cs	0	W	.....	0	0	Cloudy	Magnetic Observatory.
Woodstock, Ontario	.....	.....	30.58	776.7	— 5.3	—20.7	81	Calm	0	0	.....	10k	0	.....	.....	0	0	Cloudy.....	J. Montgomery.
SUB-SERIES.																			
St. Johns, Newfoundland	.....	.....	30.18	766.6	7.0	—13.9	.....	W	.....	.....	.....	5k	10s	.....	.....	0.16	4.1	Fair.....	John Delany.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
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.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—The originals for Brockville, Charlottetown, Port Dover, Port Stanley, Stayner, St. Johns, N. F. and those telegraphed, give the amount of cloudiness by the scale 0 to 4. The elevation of Granton is 1,015 feet, or 309.4 m.; Stratford, 1,182 feet, or 360.3 m.

UNITED STATES SERIES.

Furnished by the coöperation of Bvt. Brig. Gen. Albert J. Myer, Chief Signal Officer, U. S. Army.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain fall or melted snow in the past 24 hours. Inches	Rain fall or melted snow in the past 24 hours. Millimeters.	Weather	Observer.
Albany, N. Y.	.....	.....	30.57	776.5	9	—12.8	78	Calm	0	0	.....	.....	10s	.....	.....	0	0	Cloudy	
Alpena, Mich.	.....	.....	30.42	772.7	11	—11.7	79	SW	6	2.7	.....	.....	10n	.....	.....	0.02	0.5	Light snow	
Atlantic City, N. J.	.....	.....	30.53	775.4	29	— 1.7	78	NE	14	6.3	.....	8cs	0	W	.....	Inap.	Inap.	Cloudy	
Augusta, Ga.	.....	.....	30.23	767.8	58	14.4	94	Calm	0	0	.....	.....	8s	.....	SW	0.21	5.3	Cloudy	
Baltimore, Md.	.....	.....	30.52	775.2	35	1.7	61	N	4	1.8	.....	2ck	5s	W	.....	0	0	Cloudy	
Barnegat, N. J.	.....	.....	30.53	775.4	28	— 2.2	77	N	13	5.8	.....	10cs	0	W	.....	0	0	Fair	
Bismarck, Dakota	28.41	721.6	30.31	769.9	—12	—24.4	74	NE	6	2.7	.....	.....	10s	.....	NW	0	0	Threatening	
Boston, Mass.	.....	.....	30.52	775.2	13	—10.6	81	NW	4	1.8	.....	4cs	2s,hz.	W	W	Inap.	Inap.	Fair	
Breckenridge, Minn.	.....	.....	30.18	766.6	- 5	-20.6	82	NW	8	3.6	.....	0	8s	.....	W	0	0	Cloudy	
Buffalo, N. Y.	.....	.....	30.52	775.2	17.6	— 8.1	75	SW	3	1.3	.....	Haze	2s	.....	.....	Inap.	Inap.	Fair	
Burlington, Vt.	.....	.....	30.59	777.0	10	—12.2	68	S	3	1.3	.....	0	2s	.....	.....	0.08	2.0	Fair	
Cairo, Ill.	.....	.....	30.40	772.1	28	— 2.2	77	Calm	0	0	.....	.....	10s	.....	.....	0	0	Cloudy	
Cape Hatteras, N. C.	.....	.....	30.32	770.1	50	10.0	86	NE	19	8.5	.....	.....	10s	.....	NE	0.05	1.3	Cloudy	
Cape Henry, Va.	.....	.....	30.45	773.4	38	3.3	81	N	24	10.7	.....	2k	2s	.....	.....	0	0	Fair	
Cape Lookout, N. C.	.....	.....	30.37	771.4	51	10.6	86	NE	16	7.2	.....	.....	10s	.....	.....	0	0	Cloudy	
Cape May, N. J.	.....	.....	30.50	774.7	34	1.1	79	NE	8	3.6	.....	.....	10s	.....	NW	0	0	Cloudy	
Charleston, S. C.	.....	.....	30.31	769.9	57	13.9	93	Calm	0	0	.....	0	Fog	.....	.....	0	0	Foggy	
Cheyenne, Wyoming	23.73	602.7	29.67	753.6	—20	-28.8	72	NW	4	1.8	.....	0	1s	.....	.....	0	0	Clear	
Chicago, Ill.	.....	.....	30.42	772.7	16	— 8.8	66	S	4	1.8	.....	.....	10s	.....	.....	0.04	1.0	Cloudy	
Cincinnati, Ohio	.....	.....	30.40	772.1	30	— 1.1	78	SE	2	0.9	.....	.....	10s	.....	.....	0	0	Cloudy	
Cleveland, Ohio	.....	.....	30.51	774.9	19.6	— 6.9	84	Calm	0	0	.....	.....	10s	.....	.....	0.02	0.5	Cloudy	
Corsicana, Tex.	.....	.....	30.28	769.1	30	— 1.1	80	N	3	1.3	.....	.....	10s	.....	.....	0.24	6.1	Cloudy	
Davenport, Iowa	.....	.....	30.41	772.4	2	—16.7	85	Calm	0	0	.....	0	Sm'e	.....	.....	0	0	Clear	
Denison, Tex.	.....	.....	30.30	769.6	29	— 1.7	100	SE	7	3.1	.....	.....	Fog	.....	.....	0	0	Foggy	
Denver, Col.	24.53	623.0	29.75	755.6	13	—10.6	65	SW	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Detroit, Mich.	.....	.....	30.50	774.7	13	—10.6	100	SW	1	0.4	.....	.....	Fog	.....	.....	Inap.	Inap.	Foggy	
Dodge City, Kan.	27.28	692.9	29.73	755.1	12	—11.1	61	S	6	2.7	.....	0	0	.....	.....	0	0	Clear	
Dubuque, Iowa	.....	.....	30.41	772.4	— 4	—20.0	65	Calm	0	0	.....	.....	10s	.....	.....	Inap.	Inap.	Cloudy	
Duluth, Minn.	.....	.....	30.18	766.6	3	—16.1	73	W	4	1.8	.....	.....	10s	.....	.....	0	0	Cloudy	
Eastport, Me.	.....	.....	30.49	774.4	5	—15.0	75	N	11	4.9	.....	.....	10s	.....	.....	0.18	4.6	Cloudy	
Erie, Pa.	.....	.....	30.49	774.4	21	— 6.1	85	SE	1	0.4	.....	.....	Fog	.....	.....	Inap.	Inap.	Foggy	
Escanaba, Mich.	.....	.....	30.33	770.4	3	—16.1	73	S	11	4.9	.....	.....	10s	.....	.....	0	0	Cloudy	
Fort Gibson, Indian Ter.	.....	.....	30.22	767.6	30	— 1.1	68	SE	11	4.9	.....	.....	10s	.....	S	0	0	Cloudy	
Ft. St. Michael, Alaska	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Fort Sill, Indian Ter.	28.94	735.1	30.14	765.5	22	— 5.6	48	S	7	3.1	.....	.....	10s	.....	.....	0	0	Cloudy	
Fort Sully, Dakota	28.40	721.3	30.26	768.6	0	—17.8	84	NW	12	5.4	.....	0	0	.....	.....	0	0	Clear	
Florence, Arizona	28.51	724.1	30.07	763.8	45	7.2	.....	NE	.....	.....	.....	0	0	.....	.....	0	0	Clear	
Galveston, Tex.	.....	.....	30.24	768.1	42	5.6	91	N	12	5.4	.....	.....	10s	.....	.....	0.29	7.4	Cloudy	
Grand Haven, Mich.	.....	.....	30.48	772.9	17	— 8.3	83	SE	11	4.9	.....	.....	10s	.....	.....	0.01	0.3	Cloudy	
Indianapolis, Ind.	.....	.....	30.45	773.4	25	— 3.9	88	SE	4	1.8	.....	.....	10s,sm'	.....	.....	0.01	0.3	Cloudy	
Indianola, Tex.	.....	.....	30.35	770.9	36	2.2	71	N	18	8.0	.....	.....	10s	.....	.....	0.02	0.5	Cloudy	
Jacksonville, Fla.	.....	.....	30.29	769.4	62	16.7	94	Calm	0	0	.....	.....	10s	.....	.....	0	0	Cloudy	
Keokuk, Iowa	.....	.....	30.34	770.6	8	—13.3	78	SE	8	3.6	.....	0	0	.....	.....	0	0	Clear	
Key West, Fla.	.....	.....	30.25	768.3	72	22.2	90	NE	8	3.6	.....	0	0	.....	.....	0	0	Clear	
Kittyhawk, N. C.	.....	.....	30.41	772.4	42	5.6	91	NE	22	9.8	.....	0k	5s	W	.....	0	0	Cloudy	
Knoxville, Tenn.	.....	.....	30.35	770.9	42	5.6	91	N	2	0.9	.....	.....	10n	.....	.....	0.12	3.0	Light rain	
La Crosse, Wis.	.....	.....	30.32	770.1	6	—14.4	52	S	7	3.1	.....	Haz	Haze	.....	.....	0	0	Hazy	
Leavenworth, Kan.	.....	.....	30.22	767.6	5	—15.0	88	S	1	0.4	.....	0	Sm'e	.....	S	0	0	Clear	
Louisville, Ky.	.....	.....	30.44	773.2	29	— 1.7	89	N	5	2.2	.....	.....	10s	.....	.....	0	0	Cloudy	
Lynchburg, Va.	.....	.....	30.49	774.4	40	4.4	71	NE	4	1.8	.....	.....	10s	.....	NE	0	0	Cloudy	
Malone, N. Y.	.....	.....	30.57	776.5	5	—15.0	75	Calm	0	0	.....	0	0	.....	.....	0.30	7.6	Clear	
Marquette, Mich.	.....	.....	30.20	767.1	7	—13.9	77	SE	6	2.7	.....	0	0	.....	.....	0	0	Clear	
Memphis, Tenn.	.....	.....	30.38	771.6	33	0.6	89	SE	4	1.8	.....	.....	10n	.....	.....	0.32	8.1	Light rain	
Milwaukee, Wis.	.....	.....	30.48	774.2	— 1	—18.3	84	SW	2	0.9	.....	0	0	.....	.....	0.04	1.0	Clear	
Mobile Ala.	.....	.....	30.20	767.1	54	12.2	93	N	4	1.8	.....	.....	10s	.....	.....	0.11	2.8	Cloudy	
Montgomery, Ala.	.....	.....	30.21	767.3	56.6	13.6	84	E	10	4.5	.....	.....	10s	.....	.....	0.01	0.3	Cloudy	
Morgantown, W. Va.	29.33	745.0	30.46	773.7	29	— 1.7	89	NE	1	0.4	.....	.....	10s	.....	.....	0	0	Cloudy	
Mt. Washington, N. H.	23.69	601.7	30.05	763.3	— 1	—18.3	68	NW	48	21.5	.....	0	0	.....	.....	0.28	7.1	Clear	
Nashville, Tenn.	.....	.....	30.40	772.1	34	1.1	90	NE	1	0.4	.....	.....	10n	.....	.....	0.20	5.1	Light rain	
New Haven, Conn.	.....	.....	30.57	776.5	22	— 5.6	65	N	5	2.2	.....	8cs	Haze	.....	.....	0	0	Cloudy	
New London, Conn.	.....	.....	30.55	776.0	22	— 5.6	86	N	4	1.8	.....	5cs	2s	W	W	0	0	Fair	
New Orleans, La.	.....	.....	30.17	766.3	53	11.7	96	NW	6	2.7	.....	.....	10n	.....	NW	0.36	9.1	Light rain	
Newport, R. I.	.....	.....	30.56	776.2	20	— 6.7	72	NW	5	2.2	.....	.....	10s	.....	NW	0	0	Cloudy	
New York, N. Y.	.....	.....	30.55	776.0	26	— 3.3	76	N	4	1.8	.....	.....	10s,fg	.....	.....	0	0	Cloudy	
Norfolk, Va.	.....	.....	30.45	773.4	39	3.9	63	NE	14	6.3	.....	8k	0	W	.....	Inap.	Inap	Fair	
North Platte, Neb.	26.97	685.0	29.76	755.9	6	—14.4	88	NE	4	1.8	.....	.....	10s	.....	.....	0	0	Cloudy	
Omaha, Neb.	28.97	735.8	30.16	766.1	8	—13.3	66	S	6	2.7	.....	2cs	0	W	.....	0	0	Clear	
Oswego, N. Y.	.....	.....	30.54	775.7	23	— 5.0	94	SW	3	1.3	.....	.....	10n	.....	SW	Inap.	Inap.	Light snow	
Pembina, Dakota	.....	.....	30.19	766.8	—16	—26.7	70	NW	10	4.5	.....	0	0	.....	.....	0.01	0.3	Clear	
Philadelphia, Pa.	.....	.....	30.58	776.7	27	— 2.8	72	E	9	4.0	.....	8c	1s	W	.....	0.01	0.3	Cloudy	
Pike's Peak, Col.	17.37	441.2	29.58	751.3	— 1	—18.3	68	W	54	24.1	.....	0	5s	.....	.....	0	0	Fair	
Pittsburgh, Pa.	.....	.....	30.45	773.4	27	— 2.8	88	E	4	1.8	.....	.....	10s	.....	E	0	0	Cloudy	
Port Huron, Mich.	.....	.....	30.51	774.9	6	—14.4	100	S	3	1.3	.....	.....	Fog	.....	.....	0.08	2.0	Foggy	
Portland, Me.	.....	.....	30.55	776.0	8	—13.3	89	Calm	0	0	.....	0	Haze	.....	.....	0.05	1.3	Hazy	
Portland, Oregon	.....	.....	29.56	750.8	39	3.9	90	S	3	1.3	.....	.....	10n	.....	.....	0.02	0.5	Light rain	
Punta Rassa, Fla.	.....	.....	30.29	769.4	70.5	21.4	97	E	11	4.9	.....	0	5s	.....	E	Inap.	Inap.	Fair	
Rochester, N. Y.	.....	.....	30.54	775.7	14	—10.0	82	SW	9	4.0	.....	0c	2s	W	W	0.01	0.3	Fair	
Salt Lake City, Utah	25.29	642.4	29.62	752.3	34	1.1	69	S	16	7.2	.....	.....	10s	.....	.....	0	0	Cloudy	
Sandy Hook, N. J.	.....	.....	30.50	774.7	25	— 3.9	74	NE	12	5.4	.....	10ck	2s	W	NE	0	0	Cloudy	
San Diego, Cal.	.....	.....	30.02	762.5	53	11.7	79	SE	4	1.8	.....	.....	10s	.....	SE	0	0	Cloudy	
San Francisco, Cal.	.....	.....	29.78	756.4	47	8.3	85	Calm	0	0	.....	.....	10s	.....	S	0.39	9.9	Threatening	
Santa Fé, N. M.	23.15	588.0	29.8	754.1	18	— 7.8	68	E	3	1.3	.....	0	0	.....	.....	0	0	Clear	
Savannah, Ga.	.....	.....	30.33	770.4	60	15.6	94	NW	2	0.9	.....	0	Fog	.....	.....	0	0	Clear	
Shreveport, La.	.....	.....	30.35	770.9	33	0.6	100	Calm	0	0	.....	.....	10s	.....	S	1.47	37.3	Cloudy	
Smithville, N. C.	.....	.....	30.33	770.4	54	—12.2	93	Calm	0	0	.....	2c	2s,fg	.....	SW	0	0	Cloudy	
Springfield, Mass.	.....	.....	30.56	776.2	15	— 9.4	63	Calm	0	0	.....	5cs	0	W	.....	0	0	Fair	
St. Louis, Mo.	.....	.....	30.38	771.0	25	— 3.9	75	S	8	3.6	.....	.....	10s	.....	.....	0.01	0.3	Cloudy	
St. Marks, Fla.	.....	.....	30.30	769.6	62	16.7	99	Calm	0	0	.....	.....	Fog	.....	.....	0.03	0.8	Foggy	
St. Paul, Minn.	.....	.....	30.18	766.6	5	—15.0	75	SE	8	3.6	.....	.....	10s	.....	.....	0	0	Cloudy	
St. Paul's Island, Alaska	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Thatcher's Island, Mass.	.....	.....	30.51	774.9	16	— 8.9	49	NW	12	5.4	.....	8ck	0	W,NE	.....	0	0	Fair	
Toledo, Ohio	.....	.....	30.48	774.2	20	— 6.7	78	Calm	0	0	.....	.....	Fog	.....	.....	0	0	Foggy	
Tucson, Arizona	27.61	701.3	30.16	766.1	27	— 2.8	.....	SE	.....	.....	.....	0	0	.....	.....	0	0	Clear	
Tybee Island, Ga.	.....	.....	30.31	769.9	52	11.1	100	NE	3	1.3	.....	.....	Fog	.....	.....	0	0	Foggy	
Vicksburg, Miss.	.....	.....	30.31	769.9	37	2.8	100	Calm	0	0	.....	.....	10n,sm	.....	NE	0.23	5.8	Light rain	
Virginia City, M. T.	23.91	607.3	29.30	746.5	6	—14.4	88	SE	8	3.6	.....	0	2ks	.....	W	0.01	0.3	Fair	
Washington, D. C.	.....	.....	30.54	775.7	34	1.1	69	E	6	2.7	.....	.....	10s	.....	W	0.01	0.3	Cloudy	
Wilmington, N. C.	.....	.....	30.34	770.6	55	12.8	98	SE	8	3.6	.....	10cs	Fog	SW	.....	0	0	Cloudy	

UNITED STATES SERIES.—CONTINUED.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Upper. 0—10.	Clouds. Amount. Low'r. 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Wood's Holl, Mass.	.....	.....	30.53	775.4	19	— 7.2	69	N	8	3.6	.....	.....	8s	.....	NW	0	0	Cloudy.....	
Yankton, Dakota	28.73	729.7	30.13	765.3	12	—11.1	80	Calm	0	0	.....	Haze	0	.....	.....	0	0	Fair	
Yuma, Arizona	.....	.....	30.04	763.0	43	6.1	.....	E	.....	.....	.....	6es	0	E	.....	0	0	Fair	
Sub-Series.																			
Kingston, Jamaica, W. I.	.....	.....	30.28	769.1	73	22.8	72	Calm	0	0	.....	2c	2s	E	.....	0	0	.....	James Gall.
Navassa, W. I.	.....	.....	.....	.....	79	26.1	.....	NE	.....	.....	1	.....	.....	.....	.....	0.30	7.6	Clear.....	F. M. Everett.
Clifton, Ja., W. I.	27.29	693.2	30.10	764.5	65	18.3	78	E	2.0	0.9	.....	2c	0	E	.....	0	0	Fine, clear...	C. Partridge.
Paramaribo, D. Guiana, S. A.	.....	.....	30.01	762.2	80	26.7	78	E	.....	.....	3	3c	5k	E	.....	0.045	1.14	Fair	C. J. Hering.
Batavia, Dutch Guiana, S. A.	30.07	763.8	.....	.....	78 8	26	.....	E	.....	.....	.....	.....	.....	.....	.....	0	0	Cloudy	Dr. H. Groot.
Medellin, Colombia, S. A.	25.23	640.8	.....	.....	62.0	16.7	76	Calm	.....	.....	0	1k	0	.....	.....	0	0	Fair	Thomas Herran.
York Factory, B. A.	.....	.....	29.97	761.2	—28 0	—33.3	.....	NW	12	5.4	.....	0	0	.....	.....	0	0	Clear	J. Fortescue, W. Wood.
Honolulu, Oahu, H. I.	.....	.....	29.97	761.2	72	22.2	95	S	.....	.....	3	.....	.....	.....	.....	0.19	4.8	Cloudy.....	Daniel Smith.
Makawao, Maui, H. I.	.....	.....	29.83	757.7	66	18.9	90	Calm	.....	.....	0	0	4n	.....	.....	0.90	22.9	.....	F. L. Clarke.

NOTE.—The originals give the amount of cloudiness by the scale 0 to 4, except York Factory, Makawao, Medellin and Paramaribo. The elevation of the barometer at Bismarck is 1,677 feet, or 511.1 meters; Cheyenne, 6,057.3 ft., or 1,846.2 m.; Clifton, about 2,892 ft. or 881.5 m.; Denver, 5,136 ft., or 1,565.2 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Florence, 1,550 (?) ft. or 472.5 (?) m.; Makawao, 2,205 ft., or 672.1 m.; Morgantown, 1,027.9 ft., or 313.3 m.; Medellin, 4,876 ft., or 1,486.2 m.; Mt. Washington, 6,285 ft., or 1,915.6 m.; North Platte, 2,845 ft., or 867.4 m.; Omaha, 1,054.6 ft., or 321.4 m.; Pike's Peak, 14,150.7 ft., or 4,313.1 m.; Salt Lake City, 4,362.2 ft., or 1,329.6 m.; Santa Fe, 6,802.2 (?) ft., or 2,091.6 (?) m.; Tucson, 2,513 (?) ft., or 772.1 (?) m.; Virginia City, 5,480 (?) ft., or 1,670.3 (?) m.; Yankton, 1,278 ft., or 389.5 m. The following constants are added in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Denver, 5.22 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fe, 6.54 in.; Tucson, 2.59 in.; Virginia City, 5.48 in. The elevation of Batavia is about 6 feet; the barometric readings need the addition of 0.2 mm. or 0.01 in. for reduction to sea-level.

UNITED STATES NAVAL SERIES.

By authority of the **SECRETARY OF THE NAVY.**

Furnished by the cooperation of the Navy Department, through Commodore Daniel Ammen, U. S. N., Chief of Bureau of Navigation.

STATIONS AND VESSELS.	TRUE COURSE TOWARD—	HOURLY RATE IN KNOTS.	*BAROMETER AS REPORTED.		TEMPERATURE OF THE AIR.		RELATIVE HUMIDITY.	WIND.				CLOUDS.				RAIN-FALL OR MELTED SNOW IN THE PAST 24 HOURS.		STATE OF OCEAN.	DIRECTION OF SWELL FROM—	WEATHER.	OBSERVER.
								Direction.	Velocity		Force.	Amount.		Direction.							
			Inches.	Millimeters.	Fahrenheit.	Centigrade.	Per cent.	From—	Miles per hour.	Meters per second.	0—10.	Up'er 0—10.	Low'r 0—10.	Up'er From—	Low'r From—	Inches.	Millimeters.				
Naval Academy, Annapolis, Md.			30.12	765.0	34	1.1	70	NNE			2		10			0.10	2.5			Cloudy	
Naval Hospital, Annapolis, Md.			30.49	774.4	32	0.0	59	N			1		7		N	0.10	2.5			Raining	
Navy Yard, Mare Island, Cal.			29.90	759.4	47	8.3	85	SE			1		10							Raining	
Navy Yard, Norfolk, Va.			30.48	774.2†	40	4.4		NE			5		9ks							†D. clouds	
Navy Yard, Pensacola, Fla.			30.25	768.3	62	16.7	94	E			1		Fog			0.062	1.57			Dense fog	
Navy Yard, Portsmouth, N.H.			30.45	773.4	2	—16.7		NW			2				E					Clear	
Adams, Port Royal, S. C.			30.36	771.1	58	14.4	100	Calm			0		2							Foggy	
Ajax, Port Royal, S. C.			30.34	763.0	57	13.9		SSE			1		5		N					Foggy	
Canonicus, New Orleans, La.			29.89	759.2‡	51	10.6		N			2		10							Rainy	
Catskill, Port Royal, S. C.			30.28‡	769.1	61	16.1		Calm			0							Smooth		Foggy	
Colorado, New York, N. Y.			30.61	777.5	25	— 3.9		NNE			2		10		E					Overcast	
Dictator, Port Royal, S. C.			30.34	770.6	54	12.2	100	SSE			1		4			0	0			Foggy	
Essex, Hampton Roads, Va.			30.43	772.9	40	4.4	100	NNE			4		7		E					†D. clouds	
Hartford, Hampton Roads, Va.			30.55	776.0	40	4.4		NNE			3		9		E	0	0	Moderate.	E	Overcast	
Huron, Port Royal, S. C.			30.40	772.1	60	15.6	94	W			1		0							Foggy	
Lehigh, Port Royal, S. C.			30.50	774.7‡	53	11.7	93	SE			1									Dense fog	
Manhattan, Port Royal, S. C.			30.33‡	770.4	55	12.8		Calm			0							Smooth		Dense fog	
Michigan, Erie, Pa.			30.26	768.3	17	— 8.3	67	NW			4		8		NW					Cloudy	
Monongahela, Baltimore, Md.			30.51	774.9	33	0.6		NNE			1		10cs		E					†D. clouds	
New Hampshire, Port Royal, S. C.			30.59	776.2	60	15.6	94	Calm			0							Smooth		Foggy	
Ossipee, New Orleans, La.			30.23	767.8	51	10.5		NNW			2		10							Raining	
Santee, Annapolis, Md.			30.0	762.5	34	1.1		NNE			2		10							Cloudy	
St. Louis, League Island, Pa.			30.3	771.9	30.7	— 0.8		NE			3		9		W	0	0			Cloudy	
Tallapoosa, Washington, D. C.			30.37	771.4	35	1.7	70	ENE			2		10							†D. clouds	
Wabash, Boston, Mass.			30.56	776.2	14	—10.0		NNW			1		5							Hazy	
Wyoming, Washington, D.C.			30.89	784.6	34	1.1		E			1		10							Overcast	

* It is not known that the barometer is corrected for temperature, instrumental error or elevation. † Aneroid Barometer. ‡ Detached clouds.

UNITED STATES MARINE SERIES

REPORTED TO THE OFFICE OF THE CHIEF SIGNAL OFFICER OF THE ARMY.

NAMES OF VESSELS.	TRUE COURSE TOWARD—	HOURLY RATE IN KNOTS.	BAROMETER REDUCED TO SEA-LEVEL.		TEMPERATURE OF THE AIR.		RELATIVE HUMIDITY.	WIND.				CLOUDS.				STATE OF OCEAN.	DIRECTION OF SWELL FROM—	WEATHER.	OBSERVER.
								Direction.	Velocity.		Force.	Amount.		Direction.					
												Up'er	Low'r	Upper.	Lower.				
			Inches.	Millimeters.	Fahrenheit.	Centigrade.	Per cent.	From—	Miles per hour.	Meters per second.	0—10.	0—10.	0—10.	From—	From—				
PACIFIC MAIL S. S. CO. MARINE SERIES.																			
Furnished by the coöperation of ————, President; Williams, Blanchard & Co., Agents.																			
OCCIDENTAL AND ORIENTAL S. S. CO. MARINE SERIES.																			
Furnished by the coöperation of George H. Bradbury, President; T. H. Goodman, Agent.																			
NORTH GERMAN LLOYD OF BREMEN MARINE SERIES.																			
Furnished by the coöperation of A. Schumacher & Co., Agents.																			
MARINE SERIES. (Miscellaneous.)																			
Furnished by the coöperation of Captain James Jorgensen.																			
Schooner Addie Fuller, N. 36°, 01′, W. 74°, 14′.....	WSW	7	30.30	769.6	57	13.9	81	NNE	18	8.0	.....	.....	10s	.....	N	Swell	NE	Overcast.....	Capt. James Jorgensen.

NOTE.—The schooner Addie Fuller gives the amount of cloudiness by the scale 0 to 4.

COLLATED AT THE OFFICE OF THE CHIEF SIGNAL OFFICER OF THE ARMY, WASHINGTON, D. C.

The records which appear in this Bulletin are copied from the regular exchanges of this office, made in each instance in compliance with an especial request and are published for the uses of the coöperating observers. The barometric readings in the first two columns are reduced to freezing and their respective standards; those in the second two also to mean sea-level. The "weather" is generally published as given.

When the distinction between the upper and lower strata of clouds is not reported, the *kinds* or *types*, viz: cirrus, cumulus, stratus, nimbus, scud, fracto, pallio, haze, fog and smoke, as indicated, respectively, by the letters c, k, s, n, d, f, p, hz., fg. and sm'e, are generally published with the amount in the lower-cloud column. The distinction between the upper and lower strata is carefully made in the United States Series and a portion of the Canadian Series, and the types are indicated by the above letters or their combinations in the proper column.

Albert J. Myer

Brig. Gen. (Bv't. Asst.) Chief Signal Officer, U. S. A

BULLETIN

OF

INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON JANUARY 18, 1877.

7:35 A. M. WASHINGTON mean time.

6:7 A. M. MEXICO mean time.
7:7 A. M. SAN JOSÉ mean time.
0:6 P. M. LISBON mean time.
0:28 P. M. MADRID mean time.
0:43 P. M. GREENWICH mean time.
0:53 P. M. PARIS mean time.
1:1 P. M. BRUSSELS mean time.
1:4 P. M. UTRECHT mean time.
1:13 P. M. BERNE mean time.

1:26 P. M. CHRISTIANIA mean time.
1:33 P. M. COPENHAGEN mean time.
1:33 P. M. ROME mean time.
1:37 P. M. BERLIN mean time.
1:49 P. M. VIENNA mean time.
1:55 P. M. STOCKHOLM mean time.
2:18 P. M. ATHENS mean time.
2:39 P. M. CONSTANTINOPLE mean time.
2:44 P. M. ST. PETERSBURG mean time.

10:2 P. M. TOKEI mean time.

ALGERIAN SERIES.

Furnished by the coöperation of General d'Eudeville, Commandant Supérieur du Génie in Algeria.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Nemours			30.24	768.1	61.2	16.2	62	Calm			0		6			0	0	Fair	Charnot.
Algiers			30.24	768.1	54.7	12.6		WSW			2		3			0.197	5.0	Fair	Peter.
La Calle			30.17	766.4	54.0	12.2	72	W			3		5			0.079	2.0	Fair	Fleury.
Tunis			30.21	767.4	55.4	13.0		NW			4		2			0.118	3.0	Clear	Jacques.
Sfax																			
Saida			30.18	766.6	53.8	12.1	37	ENE			1		1			0	0	Clear	Millot.
Tebessa			30.17	766.3	37.4	3.0		SW			1		10			0	0	Hidden	Bourgeois.
Geriville			30.26	768.7	50.0	10.0	28	N			3		0			0	0	Clear	Lemaillot.
Laghouat			30.16	766.1	53.6	12 0	36	N			1		1			0	0	Clear	Guyot.
Biskra			30.16	766,0	58.8	14.9	50	NW			2		5			0	0	Fair	Kuntz.

NOTE.—In the originals the distinction between the amount of upper and lower clouds is apparently not made. The weather is published as given. The rain-fall is measured at 7 a. m., local time.

AUSTRIAN SERIES.

Furnished by the cooperation of Professor Ferdinand Osnaghi, Director of the Imperial and Royal Central Meteorological Institute at Vienna.

Agram			30.24	768.2	38.3	3.5	80	NE			2		10			0	0		Prof. Ivan Stozir.
Cracow, I. R. Observatory			30.28	769.1	36.0	2.2	89	SE			1		10			0.012	0.3		Dr. Wierzbicki.
Eperies			30.24	768 2	32.2	0.1	81	Calm			0		10			0	0		Julius Mikolik.
Gratz	28.95	735.4	30.26	768.5	36.9	2.7	76	S			3		5			0	0		Andreas Rospini.
Hermannstadt	28.72	729.4	30.20	767.0	36.9	2.7	77	E			1		10			0.075	1.90		Prof. Reissenberger
Kremsmünster	28.82	731.9	30.22	767.6	33.8	1.0	81	ENE			1		3			0	0		Prof. C. Wagner.
Lemberg			30.24	768.1	27.0	— 2.8	96	NE			1		10			0.091	2.3		Dr. T. Stanecki.
Nyiregyhaza																			Habzsuda Daniel.
Pola			30.14	765.6	47.1	8.4	55	NE			2		18			0	0		I.R.Hydrographic Office.
Szegedin			30.25	768.4	33.4	0.8	85	Calm			0		10			0	0		Karl Stancel.
Trieste			30.19	766.7	44.6	7.0	53	ENE			2		0			0	0	Clear	Prof. V. Faroli.
Vienna			30.25	768.4	35.1	1.7	90	N			1		10			0	0		I. R. Central Met. Obs'y.

NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 7 p. m., local time. The elevation of Gratz is 343.5 meters, or 1,126.9 feet; Hermannstadt, 407.8 meters, or 1,337.9 feet; Kremsmünster, 383.6 meters, or 1,258.5 feet.

BELGIAN SERIES.

Furnished by the cooperation of J. C. Houzeau, Director of the Royal Observatory at Brussels.

Arlon			30.18	766.6	29.3	— 1.5	100?	SW			2		10			0.067	1.7		
Brussels			30.03	762.8	41.4	5.2	86	S			3	10	10			0.018	0.45	Covered	Royal Observatory.
Furnes			29.95	760.6	45.5	7.5	89	S			3		8			0.035	0.9		
Maeseyck			30.07	763.7	37.6	3.1	86	S			2		0			0.028	0.7		

NOTE.—In the originals, the weather is occasionally given in general notes.

BRITISH SERIES

Furnished by the coöperation of Robert H. Scott, Esq., Director of the Meteorological Office, London, Alexander Buchan, Secretary of the Scottish Meteorological Society, Edinburgh, and the respective Observers.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Aberdeen			29.40	746.7	42.4	5.8		SSE	32	14.3			10			0.045	1.14	Raining	William Boswell.
Ardrossan			29.32	744.7				SW			4		8					Raining	William McNeil.
Armagh, Observatory			29.33	745.0	47.6	8.3		SSW	11	4.9			10					Gloomy	S. Call, for Dr. Robinson.
Birr Castle, (Parsonstown)			29.36	745.7	48.4	9.1		SSW			1		10					*D. clouds	J. Dreyer.
Bradford			29.57	751.1	48.1	8.9		S			2		10			0.02	0.5	Overcast	J. McLandsborough.
Bridgetown, (Barbados)			30.06	763.5	85	29.4		NE			3		6					*D. clouds	Sergt. J. F. Halanen, A.
Cambridge, Observatory			29.79	756.7	48.0	8.9		S			2		10			Blank	Blank	Overcast	H. Todd. [H.C.
Cardington			29.75	755.9	48.6	9.2		S			2		10					Overcast	John McLaren.
Carlisle																			T. Bell, for J. Cartmell.
Chatham, School M. E			29.79	756.7	43.2	6.2		SW			5		8					Blue sky	Maj. C. N. Martin, R.E.
Dartmoor	28.19	716.0	29.73	756.7	48.0	8.9		SW			5		10					Rain and fog	R. E. Power.
Davos Platz, (Switzerland)	24.89	632.2			29.8	— 1.2	64	Calm			0		0			0	0	Blue sky	Francis Redford, M. A.
Donaghadee			29.32	744.7	48	8.9		SW			5		10					Raining	J. Mac Gowan.
Dover			29.89	759.2	48	8.9		SW			4		5					⅗ clouded	J. Costello.
Eccles, (near Manchester)			29.56	750.8	47.9	8.8		S	10.0	4.5			10					Gloomy	Thomas Mackereth.
Falmouth, Observatory			29.62	752.3	51.9	11.1		S			5		10					Raining	The Staff.
Fort Napier, (Natal)	27.59	700.8	29.82	757.4	79.6	26.4		SE			2		9					Overcast	P'vt. G. Salmon, A. H. C
Free Town, (Sierra Leone)			29.90	759.4	86	30.0		N			0		4					*D. clouds	
Galway, Queen's College			29.28	743.7	46	7.8		SW			3		6					*D. clouds	Prof. A. H. Curtis.
Gibraltar, (Mediterranean)			30.17	766.3	60.3	15.7		NW			1		1					Blue sky	Corpl. C. Aitken, A.H.C.
Glasgow, Observatory			29.30	744.2	44.0	6.7		S			5		10					Raining	Lewis Stuart.
Great Yarmouth			29.85	758.2	47	8.3		S			4		4					Misty	G. T. Watson.
Greenwich, Royal Obs'y			29.84	757.9	48.9	9.4		SSW			2		10			Blank	Blank	Overcast	The Staff, for G. B. Airy.
Guernsey			29.79	756.7	50	10.0		SSE			5		10					Raining	Dr. S. E. Hoskins.
Helston			29.65	753.1	53	11.7		SW			6		10n			0.18	4.6	Raining	M. P. Moyle.
Holyhead			29.41	747.0	49	9.4		S			6		10					Raining	John Tilston.
Kew, Observatory			29.53	757.7	48.5	9.2		S	20	8.9			10					Raining	The Staff.
Kingstown			29.36	745.7	50	10.0		WSW			1		10					Overcast	George Mitchell.
Leicester Museum			29.69	754.1	47.9	8.8		SE			4		10					Overcast	Wm. J. Harrison, F.G.S.
Malta, (Mediterranean)			30.06	763.5	60.6	15.6		NW			2		6x					*D. clouds	Corp'l. P. Bravis, A.H.C.
Nairn			29.23	742.4	45	7.2		SSW			2		0					Clear	W. D. Penny.
Nassau, (Bahamas)			30.34	770.6	71.5	21.9		NE			1		4					Foggy	Surg. Maj. Henry.
Nottingham, Observatory			29.68	753.9	48.1	8.9		S			6		10d		S	0.009	0.2	Overcast	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			29.64	752.8	47.2	8.4		S			6		10					Overcast	Rev. Stephen Whitty.
Oxford, Radcliffe Obs'y			29.74	755.4	49	9.4		S			2		10					Misty	J. Lucas.
Plymouth			29.67	753.6	51.0	10.6		SSW			5		10					Raining	John Merrifield.
Roche's Point			29.39	746.5	49	9.4		SW			6		10					Raining	W. Kennedy.
Saint Ann's Head			29.49	749.0	50	10.0		S			6		10					Raining	John C. Walker.
Saint Helier, (Jersey)			29.84	757.9	50.0	10.0		S			6		10					Raining	A. P. Amy.
Sandwick Manse, (Orkneys)			29.23	742.4	41	5.0		SE	43	19.2			5					*D. clouds	Rev. C. Clouston, LL. D.
Scarborough																			F. Shaw.
Scutari Cemetery, (Turkey)			30.12	765.0	43.5	6.4		NE			2		10			Blank	Blank	Misty	Sergt. W. H. Lyne.
Sheffield			29.62	752.3	47.4	8.6		S			3		10			0.178	4.52	Overcast	W. F. Cooper.
Silloth Rectory			29.47	748.5	48.9	9.4	91	S			6		8			0.815	20.70	*D. clouds	Rev. Francis Redford.
Stonyhurst, Observatory			29.54	750.3	45.8	7.7		S			6		8					Misty	Rev. S. J. Perry.
Stornoway, Lews C., (Hebr.)			29.04	737.6	47	8.3		S			8		8					*D. clouds	John Smith.
Stratfield Turgiss			29.82	757.4	48.4	9.1		SE			2		10					Overcast	Rev. Charles H. Griffith
Thurso			29.22	742.2	44	6.7		S			6		7					*D. clouds	John Trotter.
Truro, Royal Institution			29.63	752.6	53	11.7		SW			7		10					Raining	W. Newcombe.
Valencia, Observatory			29.36	745.7	48.9	9.4		WSW	19	8.5			10					*D. clouds	The Staff.
SUB-SERIES.																			
Calf of Man, (Isle of Man)					42	5.6		S			8		10			0.5	12.7		Henry Mercer.
Cape Good Hope, Obs'y			29.97	761.2	77.3	25.2	59	S	34	15.2		0	1						The Staff, for E. J. Stone.
Hobart Town, (Tasmania)			29.62	752.3	72.6	22.2	94	S			5		10n			0	0	Cloudy	Francis Abbott, F.R.A.S.
Leith, Restalrig Park			29.37	746.0	46.8	8.2		S			4		10ks					Showery	Andrew Gibb.
Mauritius, Observatory			30.00	762.0	84.8	29.3	59	WSW	12.2	5.5		0	7			0	0	*D. clouds	C. Meldrum.
Melbourne, Observatory			29.89	759.2	59.0	15.0	72	SSE	7	3.1			2			0	0	Very fine	R. L. J. Ellery.
Monach L't-house, (Hebrides)			29.12	739.6	47	8.3		SW			7		10			0.2	5.1		J. Youngclause.
North Unst, (Shetland Is.)			29.36	745.7	43	6.1		S			7		10			Blank	lank		Robert Burnet.

NOTE.—Generally, the originals do not give the relative humidity, rain-fall, or distinction between upper and lower clouds. The originals give the wind direction to 32 points and weather by the Beaufort notation. The originals give the barometer for Aberdeen, Cardington, Galway, Oxford, St. Helier, Sandwick, Scarborough, Stonyhurst, Leith, Monach and North Unst as read off and the cloudiness for Stornoway by the scale 0 to 4. The wind-force is given by the scale 0 to 12 in the official series; 0 to 6 in the sub-series; except in lbs. per square foot for Greenwich and Hobart Town. The rain-fall is measured at Aberdeen at 10 a. m.; Bradford, 9 a. m.; Hobart Town, 7:30 a. m.; Nottingham, 6 p. m.; Mauritius, 9 a. m., local time. The elevation of Dartmoor is 1,400 feet, or 426.7 meters; Davos Platz, 5,105? feet, or 1,556.0? meters; Fort Napier, 2,200 feet, or 670.6 meters. *Detached clouds.

COSTA RICA SERIES.

By authority of the MINISTER OF FOREIGN AFFAIRS.

Furnished by the coöperation of Senor Federico Maison, Director of the Central Office of Statistics and Meteorology.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
San José																			

DANISH SERIES.

Furnished by the cooperation of Captain N. Hoffmeyer, Director of the Royal Danish Meteorological Institute at Copenhagen.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Copenhagen			30.18	766.6	34.9	1.6	84	SSE			2		2						
Fanöe			30.06	763.4	33.3	0.7	85	S			4		1						
Godthaab, (Greenland)			28.90	734.1	5.2	—14.9	87	ENE			2		10						
Stykkisholm, (Iceland)			28.62	726.9	33.3	0.7	96	E			6		8						
Thorshavn, (Faröe)			28.97	735.8	41.4	5.2	87	SE			8		10					Raining	
Vestervig			30.01	762.2	33.4	0.8	92	SSE			6		10						

NOTE.—The originals give the wind-force by the scale 0 to 6; occasionally, weather by Vienna symbols; no distinction between the amount of upper and lower clouds.

FRENCH SERIES.

Furnished by the cooperation of His Excellency, U. J. Le Verrier, Director of the Paris Observatory, and the respective Observers.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Alençon			30.02	762.6	46.4	8	97	SW			2		8kn		SW	0.205	5.2	Very cloudy	Normal School.
Amiens			30.00	761.9	48.6	9.2	86	E			3		5		E	0.079	2.0	Cloudy	Normal School.
Avignon			30.27	768.8	46.4	8	65	N			1		0			0	0	Very clear	Normal School.
Bar-sur-Seine			30.14	765.5	40.6	4.8	89	SSW			1		10			0	0	Covered	C. Saillard.
Beaumette, (near Angers)			29.99	761.8	45.9	7.7	97	SW	38.0	17.0					SW	0.016	0.4		Beaumette Observ'tory.
Beauvais			30.02	762.6	40.1	9.5	80	S			1		10		SSW	0.053	1.35	Covered	Normal School.
Besançon			30.23	767.8	37.4	3	80	SE			2		0			0	0	Clear	Normal School.
Bourg en Bresse			30.23	767.8	39.0	3.9	73	S			1		0			0	0	Clear	Normal School.
Bourges			30.10	764.4	44.2	6.8	97	SE			2		2		SE	0.126	3.2	Slightly cl'dy	Normal School.
Brest			29.72	754.9	51.6	10.9	93	SW			6		10		SW	0.236	6.00	Raining	Naval Observatory.
Carcassonne			30.15	765.7	47.8	8.8	61	NW			1		0			0	0	Clear	Normal School.
Caen																			Normal School.
Chartres			30.04	762.9	46.0	7.8	94	SSW			3		8		N	0.134	3.4		Normal School.
Châlons-sur-Marne			30.12	765.0	41.5	5.3	87	S			3		10n			0	0	Covered	Normal School.
Clermont			30.11	764.8	48.7	9.3	68	SW			1		2			0	0	Slightly cl'dy	Puy de Dome Obs'y.
Commercy			30.22	767.6	34.2	1.2	96	SE			1		10			0	0	Covered	Normal School.
Commune de Gréasque*			30.19	766.9	48.4	9.1	61	NW			2		0			0	0		M. Kina.
Grenoble			30.24	768.0	36.3	2.4	88	SE			1		0			0	0	Clear	Normal School.
La Roche-sur-Yon			30.03	762.8	48.4	9.1	97	S			2		10			0.532	13.50	Covered	Normal School.
Le Mans			30.02	762.5	47.3	8.5	92	SSW			4		8		SW	0.20	5.	Very cloudy	Normal School.
Lons-Le-Saulnier			30.19	766.7	37.2	2.9	86	NW			2		10		SW	0	0	Foggy	Normal School.
Lorient			29.89	759.2	53.6	12.0	78	SSW			4		10			0.205	5.2	Raining	Naval Observatory.
Mâcon			30.26	768.5	34.7	1.5	89	Calm			0		10			0	0	Covered	Normal School.
Metz			30.22	767.6	32.2	0.1	92	NE			3		10			0	0	Foggy	M. Schuster.
Mirecourt			29.98	761.6	36.3	2.4	83	W			2		10		E	0	0	Covered	Normal School.
Nismes			30.19	766.8	48.9	9.4	71	NE			2		0			0	0	Clear	Normal School.
Orleans			30.04	763.0	47.5	8.6	73	S			2		10			0.055	1.4	Covered	Normal School.
Paris, Observatory			30.05	763.2	46.2	7.9	89	ESE			2		10			0.083	2.10	Misty	National Observatory.
Parthenay																			Normal School.
Privas			30.18	766.5	42.1	5.6		NNE			2		2		NNE	0	0	Slightly cl'dy	Normal School.
Rochefort, Observatory			30.07	763.6	51.3	10.7	85	SSE			3		10		NW	0	0	Covered	Naval Observatory.
Rouen			29.97	761.3	50.0	10.0	78	SSE			2		10		S	0.122	3.1	Covered	Normal School.
Saint Lo																			Normal School.
Tarbes	28.98	736.2	30.08	763.9	52.7	11.5	78	E			2		0			0	0	Clear	Normal School.
Villefranche			30.18	766.6	43.9	6.6	77	SE			1		0			0	0	Clear	Normal School.
Sub-Series.																			
Fort de France, Martinique			29.93	760.1	77.0	25													L'Abbé Marchési.
Marseilles			30.15	765.9	52.5	11.4	52	SW			1		1			0	0	Partly cl'dy	Marseilles Observatory.
Mont-Louis	24.88	632.0	30.20	767.0	38.1	3.4	53	SW	9.3	4.17			0			0	0		—. Falguère.
Montsouris, Paris			30.03	762.8	46.2	7.9	93	SSE			3		10		S	0.102	2.6		Montsouris Observatory
Perpignan			30.17	766.2	48.2	9.0	76	E	7.4	3.33			0			0	0		Dr. Fines.
Pic du Midi, (Summit,) H. P.																			M. Baylac.
Pic du Midi, (Plantade,) H. P.	22.48	570.9			33.8	1.0		NNW			3		3			0	0	Fair	General de Nansouty.
Saint Maur, (near Paris)			30.04	763.1	40.6	8.1	93	SSE			1		10			0.063	1.6	Covered	E. Renou.
Toulouse			30.14	765.6	49.6	9.8	69	SSE			1		0			0	0		Toulouse Observatory.
Tours			30.05	763.3	48.9	9.4	84	S			2		10		SW	0.083	2.1		C. Marquet.
Versailles, (near Paris)			30.03	762.8	47.8	8.8	92	S			1		10			0.085	2.16	Covered	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai)			30.21	767.4	41.0	5.0	91	E	6.0	2.67			2			0	0		Marc Dechevrens, S. J.

Note.—Generally, the originals give the wind-force by the scale 0 to 7; no distinction between upper and lower clouds, and, in the official series, the amount by the scale 0 to 4; the rain-fall as measured at 7, 8 or 9 a. m., local time; at Clermont, 9 a. m. of the following day: the weather in general terms as published. The elevation of Clermont is 388 meters, or 1,272.9 feet; Commune de Gréasque, 322 meters, or 1,056.4 feet; Tarbes, 308 meters, or 1,010 feet; Mont-Louis, 1,586.40 meters, or 5,204.8 feet; Pic du Midi, (Summit,) 2,877 meters, or 9,439.1 feet; Pic du Midi, (Plantade,) 2,366 meters, or 7,762.6 feet. In correcting the Mont-Louis barometric observations for altitude, the constant 135. millimeters has been added. *Bouches-du-Rhône

GERMAN SERIES.

Furnished by the coöperation of Professor Dr. G. Neumayer, Director of the German Naval Observatory, Hamburg.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Bamberg			30.18	766.6	35.6	2.0	65	SW			2		10			0	0		Prof. T. Hoh.
Berlin			30.27	768.8	36.7	2.6	72	S			1		0			0	0		Prof. Arndt.
Breslau			30.28	769.2	35.8	2.1	73	S			1		10			0	0		Royal University Obs'y
Carlsruhe			30.19	766.9	27.7	— 2.4	96	SSW			1		10			0	0		A. Senz.
Cassel			30.18	766.6	34.0	1.1	77	SE			3		10	SSW		0	0		Dr. H. Möhl.
Crefeld			30.08	763.9	37.9	3.3	74	SE			4		8			0	0		Director Lose.
Emden			30.20	767.0	35.2	1.8	86	S			2		10			0	0		Prof. Prestel.
Frankfort on the Main			30.22	767.6	35.8	2.1	62	S			1		2			0	0		Physical Society.
Friedrichshafen	28.76	730.6	30.28	769.0	31.3	— 0.4	92	N			2		4			0	0		M. Wilhelm.
Hamburg			30.15	765.9	32.7	0.4	82	SE			3		2			Inap.	Inap.	Clear	Captain F. Hegemann.
Kiel			30.12	765.1	31.3	— 0.4	89	SSE			2		0			0	0		Prof. G. Karsten.
Königsberg, (Prussia)			30.35	770.8	24.6	— 4.1	86	SE			2		4			0	0		Prof. E. Luther.
Köslin			30.29	769.4	37.9	3.3		Calm			0		10			0	0		H. Müller.
Leipsic			30.25	768.3	32.9	0.5	76	SSW			3		2	SSW		0	0		Prof. Bruhns.
Memel			30.36	771.2	23.7	— 4.6	84	ESE			3		10ks			0.043	1.1		Reinbrecht & Skalweit.
Münster			30.08	764.0	37.6	3.1	74	E			1		3			0	0		Prof. E. Heis.
Neufahrwasser			30.30	769.6	31.3	— 0.4	92	S			2		10			0.079	2.0	Light snow	A Lothe.
Posen			30.49	774.5	37.2	2.9	75	SW			1		10			0	0		Dr. Magener.
Strassburg, (in Alsace)			30.23	767.7	28.6	— 1.9	100	E			1		6	NW		0	0		Dr. Schur.
Stuttgart			30.20	767.0	35.6	2.0	64	SW			1		0			0	0		Prof. Schoder.
Thorn																			Dr. Hasenbalg.
Treves, (Trier)																			Prof. Flesch.
Weissenburg, (Bavaria)	28.63	727.1	30.10	764.5	33.8	1.0	81	SW			1		10			0	0	Foggy	Dr. von Bebber.
Wustrow, Naval School			30.21	767.2	32.9	0.5	89	SSE			4		4	SE		0	0		E. F. Schütz.
German Naval Series.			30.24	768.1	34.0	1.1	79	SSE			3		0			0	0		

Note.—The elevation of Friedrichshafen is 413.4 meters, or 1,356.3 feet; Weissenburg, 431 meters, or 1,414.0 ft. In the originals the distinction between the amount of upper and lower clouds is not made. It is not always certain that the remarks in the weather column refer to the moment of observation.

GREEK SERIES.

Furnished by the coöperation of Professor Dr. J. F. Julius Schmidt, Director of the Royal Observatory at Athens.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Athens			30.00	762.0	54.9	12.7		NE										Half clear...	

Note.—The originals give the barometer corrected, but not reduced to sea-level; occasionally the kind of clouds; the weather as published. They omit the humidity wind-force, amount of cloudiness and rain-fall.

ITALIAN SERIES.

Furnished by the coöperation of His Excellency the Minister of Agriculture, Industry and Commerce, and the respective Observers.

Udine			30.16	766.0	44.8	7.1	48	SE	2.5	1.1			0			0	0		Prof. Giovanni Cloda
Stelvio	22.10	561.2			18.1	— 7.7		SE			1		0			0	0		Signora Ernesta Manfredi.
Valdobbia	22.11	561.6			20.7	— 6.3	49	WNW			1		0			0	0		Ab. Dom. Mongini.
Padua			30.17	766.4	43.0	6.1	56	N	3.1	1.4			0			0	0		Prof. Dott. Lorenzoni.
Vicenza			30.17	766.3	44.2	6.8	58	SE	3.1	1.4			0			0	0		Conte Alm. Da Schio.
Verona			30.15	765.7	41.9	5.5	89	E			1		0			0	0		Dott. B. Bertoncelli.
Bergamo																0	0		Prof Trionfini Carlo.
Domodossola			30.18	766.5	41.0	5.0	60	S			4		0			0	0		Prof. Giuseppe Calza.
Milan			30.19	766.9	42.6	5.9	82	S			1		3			0	0		Ab. Gio. Capelli.
Pavia			30.20	767.0	39.2	4.0	78	WSW			1		0			0	0		Prof. Gio. Cantoni.
Moncalieri			30.20	767.1	40.1	4.5	89	ENE	2.6	1.1			0			0	0		Prof. P. F. Denza.
Mondovi	28.21	716.4	30.19	766.7	39.0	3.9	52	N			2		0			0	0		Prof. D. C. Bruno.
Porto Maurizio			30.21	767.3	51.6	10.9	45	ESE			2		1			0	0		Prof. L. Vassallo.
Genoa			30.16	766.0	53.1	11.7	27	N	0	0			0			0	0		Prof. G. M. Garibaldi.
Piacenza			30.21	767.4	39.2	4.0	80	N	1.8	0.8			0			0	0		Dott. G. Manzi.
Parma			30.21	767.2	42.4	5.8	68	W			2		0			0	0		Prof. P. Pigorini.
Florence			30.19	766.9	48.2	9.0	52	NE			4		0			0	0		Cav. F. Meucci.
Leghorn			30.15	765.9	48.4	9.1		ENE	7.4	3.3			0			0	0		Prof. P. Monte.
Siena	28.90	734.1	30.14	765.6	44.6	7.0	55	N	0	0			3	N		0	0		Prof. L. Toscani.
Urbino	28.55	725.2	30.16	766.0	39.6	4.2	70	N			2		10			0	0		Prof. P. Serpieri.
Pesaro			30.19	766.9	44.4	6.9	72	NNW	26.2	11.7			10	N		0	0		Prof. Luigi Guidi.
Ancona			30.17	766.4	45.3	7.4	74	WNW			4		10	W		0.038	0.9	Light rain...	Prof. F. De— Bosis.
Grosseto			30.16	766.0	50.4	10.2	68	NNE			1		2	SE		0	0		Avv. P. Ponticelli.
Rome			30.11	764.8	52.2	11.2	63	NNE	3.8	1.7			1			0	0		Prof's. P. Secchi & L. Respighi.
Naples, O. U			30.06	763.5	55.0	12.8	44	NNE			2		3	NE		0	0		Prof. L. Palmieri.
Lecce			30.08	763.9	53.6	12.0	61	N	13.7	6.1			3	NW		0	0		Prof. C. De—Giorgi.
Cosenza			30.04	763.0	51.1	10.6	65	WNW	7.4	3.3			6			0	0		Prof. F. D. Conti.
Cagliari																			Prof. A. Pacinotti.
Riposto, (Sicily)			30.00	761.9	56.1	13.4	62	NE			2		6	S		0	0		Prof. F. Caflero.
Palermo			30.04	763.0	55.2	12.9	55	N	6.3	2.8			6			0.26	6.7	Raining.....	Prof. G. Cacciatore.
Caltanissetta	28.06	712.6	30.05	763.2	49.3	9.6	52	W			4		3	S		0	0		Prof. A. Pagani.
Siracusa			30.00	762.1	55.4	13.0	64	NNE			2		7	NNE		0.020	0.5	Light rain...	Prof. V. Giuliano.
Sub-Series.																			
Naples, S. R.			30.13	765.2	51.1	10.6	54	NE	1.8	0.8			0			0	0		Prof. F. Brioschi

Note.—The originals give the wind-force by the scale 0 to 4, or the velocity in kilometers per hour; generally, no distinction between upper and lower clouds; occasionally the weather by the Vienna symbols. The elevation of Stelvio is 2,543.0 meters, or 8,342.9 feet; Valdobbia, 2,548.0 meters or 8,359.3 feet; Bergamo, 379.6 meters, or 1,245.3 feet; Mondovi, 556 meters, or 1,824.2 feet; Siena, 348.5 meters, or 1,143.3 feet; Urbino, 451 meters, or 1,479.7 feet; Caltanissetta, 570.3 meters, or 1,871.0 feet.

JAPANESE SERIES.

Furnished by the coöperation of the Imperial University of Tokei, Japan.

Tokei			30.31	769.9	32	0.0		Calm	0	0			0			0	0		Prof. P. V. Veeder.

Note.—The originals give the amount of cloudiness by the scale 0 to 4 without distinguishing between upper and lower clouds. The rain-fall is measured at 7 a. m., local tim

MEXICAN SERIES.

By authority of the Secretary of Public Works.

Furnished by the coöperation of Senor Mariano Barcena, Director of the Central Meteorological Observatory in the City of Mexico.

Mexico																			Mariano Barcena. Vicente Reyes. Miguel Perez. (Engineers in charge.)

Note.—The elevation of Mexico is 2,290 meters, or 7,512.9 feet. The rain-fall is measured at 6 a. m., local time.

NETHERLANDS' SERIES.

Furnished by the coöperation of Professor Buys Ballot, Director of the Royal Meteorological Institute of the Netherlands at Utrecht.

Flushing			30.02	762.4	42.8	6.0		SSW			5					0	0		
Groningen			29.98	761.4	36.3	2.4		S			2					0	0		
Heider			29.97	761.1	40.5	4.7		S			4					0.118	3.0		
Utrecht			29.99	761.8	39.7	4.3	75	SSE			4		8			0	0	Very cloudy	

Note.—The originals give the wind-pressure in kilograms per square meter; for Utrecht, they give the weather as published, from which the amount of cloudiness is taken by the scale 0 to 4, without distinguishing between upper and lower clouds. It is assumed that the barometer readings have been reduced to sea-level.

NORWEGIAN SERIES.

Furnished by the coöperation of Professor H. Mohn, Director of the Royal Norwegian Meteorological Institute at Christiania.

Bergen			29.75	755.7	42.8	6.0	82	S	25.5	11.4			10			0.208	5.2	Raining.....	
Brönö			29.82	757.5	38.5	3.6	63	SSE	17.9	8			10						
Christiania			30.09	764.3	33.4	0.8	96	SSE	1.6	0.7			10			0.035	0.9	Foggy.....	
Tromsö			29.76	756.0	32.4	0.2	89	SW	8.9	4			10			0	0		

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols. The loudiness and weather at Bergen refer to 2h., p. m., local time, instead of 1h., 4 min.

PORTUGUESE SERIES.

Furnished by the coöperation of J. C. de Brito Capello, Director of the Meteorological Observatory of the Infante Don Luiz at Lisbon.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Angra, (Azores)	.....	.....	29.73	755.2	57.6	14.2	89	WNW	11.2	5.0	.....	.....	8	.....	.....	0.756	19.2	.....	Dr. J. A. Sampaio.
Campo Major	.....	.....	30.21	767.4	50.9	10.5	84	SE	3.7	1.67	.....	.....	9	WNW	.....	0	0	.....	Dr. A. M. R. dos Santos.
Funchal, (Madeira)	.....	.....	30.22	767.5	61.0	16.1	59	NNE	3.0	1.33	.....	.....	10	.....	.....	0	0	.....	Capt. D. A. de Cunha.
Lisbon	.....	.....	30.21	767.2	55.9	13.3	93	SW	16.1	7.2	.....	.....	9	SW	.....	0.059	1.5	.....	The Observatory.
Ponta Delgada, (Azores)	.....	.....	29.82	757.5	59.7	15.4	96	WSW	27.3	12.2	.....	.....	10	.....	.....	0.173	4.4	Raining	
.....																			

Note.—The originals give the wind-velocity in kilometers per hour; occasionally, the weather by the Vienna symbols; the amount of cloudiness without distinguishing between upper and lower clouds; the barometer corrected but not reduced to sea-level. The rain-fall at Lisbon is measured at noon, instead of 0 h. 6 m., p. m.

RUSSIAN SERIES.

Furnished by the coöperation of Professor H. Wild, Director of the Imperial Central Physical Observatory of Russia, at St. Petersburg.

Warsaw	.....	.....	30.29	769.4	26.2	— 3.2	98	NNW	2	1	.....	.....	10	.....	.....	.....	.....	Snowing	Astronomical Obs.
Wilna	.....	.....	30.43	773.0	9.7	—12.4	90	E	4	2	.....	.....	2	.....	.....	.....	.....	.....	Astronomical Obs.
Dorpat	.....	.....	30.56	776 1	9.3	—12.6	90	ESE	7	3	.....	.....	8	.....	.....	.....	.....	.....	Physical Cabinet.
St. Petersburg	.....	.....	30.61	777.6	— 2.2	—19.0	88	ESE	4	2	.....	.....	0	.....	.....	.....	.....	.....	Central Physical Obs.
Kuopio	.....	.....	30.56	776.2	2.3	—16.5	.....	SE	7	3	.....	.....	0	.....	.....	.....	.....	.....	Ch. Forsten.
Kieff	.....	.....	30.34	770.6	12.2	—11.0	93	WNW	2	1	.....	.....	10	.....	.....	.....	.....	.....	Physical Cabinet.
Nikolaiev	.....	.....	30.38	771.7	18.5	— 7.5	89	NE	13	6	.....	.....	10	.....	.....	.....	.....	.....	Kurdakof.
Kertch	.....	.....	30.27	768.8	34.7	1.5	91	N	7	3	.....	.....	10	.....	.....	.....	.....	Foggy	Lagorio.
Moscow	.....	.....	30.53	775.5	7.5	—13.6	83	NW	7	4	.....	.....	8	.....	.....	.....	.....	.....	Meteorological Obs.
Lugan	.....	.....	30.21	767.3	33.6	0.9	89	SSW	2	1	.....	.....	10	.....	.....	Blank	Blank	.....	Meteorological Obs.
Archangel	.....	.....	30.57	776.5	10.4	—12.0	100	WSW	18	8	.....	.....	10	.....	.....	.....	.....	.....	Ogorodnikof.
Tiflis	28.78	730.9	30.23	767.7	48.0	8.9	66	Calm	0	0	.....	.....	7	.....	.....	.....	.....	.....	Physical Observatory.
Astrakhan	.....	.....	30.48	774.1	26.6	— 3.0	78	ESE	9	4	.....	.....	8	.....	.....	.....	.....	.....	Sebastianof.
Kasan	.....	.....	30.68	779.3	— 2.7	—19.3	90	Calm	0	0	.....	.....	1	.....	.....	.....	.....	.....	Physical Cabinet.
Orenburg	.....	.....	30.61	777.5	— 8.5	—22.5	61	SSW	13	6	.....	.....	7	.....	.....	.....	.....	.....	Tschernischei.
Ekaterinburg	29.54	750.4	30.60	777.3	4.1	—15.5	80	WSW	9	4	.....	.....	10	.....	.....	.....	.....	.....	Meteorogical Obs.
Nukuss	.....	.....	30.56	776.3	21.6	— 5.8	85	NE	9	4	.....	.....	0	.....	.....	.....	.....	.....	
Kasaly	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Bobrof.
Tashkend	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Michelson.
Barnaul	.....	.....	30.57	776.5	2.3	—16.5	85	SW	9	4	.....	.....	10	.....	.....	.....	.....	.....	Meteorological Obs.
Yeniseisk	.....	.....	30.20	767.1	—26.1	—32.3	67	Calm	0	0	.....	.....	0	.....	.....	.....	.....	.....	Marka.
Irkutsk	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Usolzef.
Peking, (China)	.....	.....	30.22	767.6	23.7	— 4.6	86	Calm	0	0	.....	.....	0	.....	.....	.....	.....	.....	Physical Observatory.
Nertchinsk	27.82	706.6	30.18	766.6	—16.2	—26.8	98	Calm	0	0	.....	.....	0	.....	.....	.....	.....	.....	Meteorological Obs.
Vladivostock	.....	.....	30.28	769.0	18.9	— 7.3	75	NW	9	4	.....	.....	0	.....	.....	.....	.....	.....	
Nikolaievsk, on the Amoor	.....	.....	.....	.....	— 3.8	—19.9	.....	Calm	0	0	.....	.....	0	.....	.....	.....	.....	.....	
.....																			
.....																			
.....																			

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols; they omit the rain-fall. The elevation of Tiflis is 409 meters, or 1,341.8 feet; Ekaterinburg, 306. 4 ? m., or 1,006.2 ? ft.; Tashkend, 494.2 ? m., or 1,621.3 ? ft.; Irkutsk, 392 m., or 1,286 ft.; Nertchinsk, 592.0 ? m., or 1,942.2 ? ft.

SPANISH SERIES.

Furnished by the coöperation of Antonio Aguilar, Director of the Royal Observatory at Madrid, and of Don Cecilio Pujazon, Captain R. N. Director of the Naval Observatory at San Fernando.

Madrid	.....	.....	30.28	769.0	40.1	4.5	98	SW	0	0	.....	.....	10	.....	.....	0.008	0.2	Cloudy	Royal Observatory.
San Fernando	.....	.....	30.25	768.3	54.1	12.3	75	N	0	0	.....	2	6	N	N	.....	.....	.....	Naval Observatory.
.....																			
.....																			
.....																			

Note.—The originals give the weather in general terms, as published; rain-fall for San Fernando from preceding to following midnight; wind-velocity for Madrid in kilometers per hour.

SWEDISH SERIES.

Furnished by the coöperation of Professor R. Rubenson, Director of the Royal Swedish Meteorological Institute, at Stockholm, and of Dr. H. H. Hildebrandsson, Chief of the Meteorological Division of the Upsala Observatory.

Haparanda	.....	.....	30.39	771.9	17.6	— 8.0	94	S	.....	.....	4	.....	5	.....	.....	0	0	.....	
Umea	.....	.....	30.35	771.0	19.8	— 6.8	94	SSW	.....	.....	6	.....	10	.....	.....	0	0	.....	
Hernosand	.....	.....	30.26	768.7	28.0	— 2.2	98	SSE	.....	.....	4	.....	10	.....	.....	0.028	0.7	Snowing	
Stockholm	.....	.....	30.29	769.3	30.7	— 0.7	98	SE	.....	.....	4	.....	10	.....	.....	0	0	.....	
Wisby	.....	.....	30.30	769.7	32.0	0.0	92	S	.....	.....	4	.....	10	.....	.....	0	0	.....	
Sub-Series.																			
Upsala	.....	.....	30.29	769.4	29.7	— 1.3	92	SE	11.2	5.0	.....	.....	10	.....	.....	0.002	0.05	Snowing	Dr. Hildebrandsson.
.....																			

Note.—The originals give the wind-force by the scale 0 to 6, and Upsala also velocity in meters per second; occasionally, the weather by the Vienna symbols, or in general terms; no distinction between the amount of upper and lower clouds. The rain-fall is measured at 8 a. m., local time.

SWISS SERIES.

Furnished by the coöperation of Professor R. Wolf, Director of the Observatory at Zurich, and of Professor E. Plantamour, Director of the Observatory at Geneva.

STATIONS.	Barometer. Corrected for instrum tal error and temperature. Inches.	Barometer. Corrected for instrum tal error and temperature. Millimeters.	Reduced to sea-level. Inches.	Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	OBSERVER.
Geneva	28.76	730.5	30.25	768.4	32.9	0.5	87	S	.....	.....	1	.....	8	.....	.....	0	0	Foggy	The Observatory.
Zurich	28.54	724.9	30.26	768.6	30.9	— 0.6	83	NW	.....	.....	1	.....	2	.....	.....	0	0	Clear	The Observatory.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—For Geneva the corresponding departures from the normal values are: Barometer, +2.9 mm; Thermometer, —1.0 cent.; Relative Humidity, +9 per cent.

NOTE.—The rain-fall is measured at Zurich at 7 a. m. on the following day. The originals give the barometer corrected but not reduced to sea-level; the wind-force by the scale 0 to 4 for Zurich; the amount of cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The elevation of Geneva is 408 meters, or 1,339 feet, and that of Zurich 470 meters, or 1,542 feet.

TURKISH SERIES.

Furnished by the coöperation of A. Coumbary, Effendi, Director of the Central Observatory at Constantinople, and of Professor C. V. A. Van Dyck, Superintendent of the Lee Observatory at Beirut.

Constantinople	.....	.....	30.16	766.1	42.6	5.9	87	NE	17	7.5	.....	.....	10	.....	NE	0.402	10.2	.....	
Fao, (Persian Gulf)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Salonica	.....	.....	30.14	765.6	59.7	15.4	.....	NE	.....	.....	2	.....	5	.....	.....	.....	.....	.....	
Valona	.....	.....	29.99	761.7	55.8	13.2	.....	SW	.....	.....	1	.....	5	.....	.....	.....	.....	.....	
Varna	.....	.....	29.96	761.0	24.8	— 4.0	.....	N	.....	.....	2	.....	5	.....	.....	.....	.....	.....	
SUB-SERIES.																			
Beirut, (Syria,) Lee Obs'y	.....	.....	30.04	763.0	65.5	18.6	65	N	.....	.....	1	.....	0	.....	.....	0.04	1.0	Blue sky	Prof. C. V. A. Van Dyck.

NOTE.—The originals give the wind-force by the scale 0 to 7, (except Beirut, by the scale 0 to 12, and Constantinople velocity in meters per second;) the weather in general terms as published; no distinction between upper and lower clouds, and, except Constantinople and Beirut, the amount by the scale 0 to 4. It is assumed that the barometer is reduced to sea-level.

CANADIAN SERIES.

Furnished by the coöperation of Professor G. T. Kingston, Director of the Magnetic Observatory at Toronto, and Superintendent of the Meteorological Office of the Dominion of Canada, and the respective Observers. Those marked with a star (*) are also telegraphed daily to the office of the Chief Signal Officer, U. S. Army.

Bathurst, N. B	.....	.....	30.19	766.8	0.5	—17.5	88	SW	3	1.3	.....	.....	9	.....	.....	.....	.....	.....	Hon. J. Ferguson.
Brockville, Ontario	.....	.....	30.44	773.2	18	— 7.8	.....	Calm	0	0	.....	.....	10s	.....	SW	0	0	Cloudy	W. R. Bigg.
*Chatham, N. B	.....	.....	30.26	768.6	1	—17.2	94	SW	5	2.2	.....	8ck	2ks	W	W	0	0	Fair	G. A. Blair.
Charlottetown, P. E. Island	.....	.....	30.31	769.9	8	—13.3	87	Calm	0	0	.....	5cs	0	.....	.....	0	0	Fair	H. J. Cundall, C. E.
Cornwall, Ontario	.....	.....	30.42	772.7	17.5	— 8.1	88	W	.....	.....	1	.....	10s	.....	.....	0	0	Dull	James Smith, M. A.
Dalhousie, N. B	.....	.....	30.22	767.6	.....	.....	.....	W	.....	.....	1	.....	.....	.....	.....	0	0	Threatening	H. A. Johnson.
Esquimault, B. C	.....	.....	29.91	759.7	35.1	1.7	80	NE	.....	.....	.....	0	0	.....	.....	0	0	Clear	W. H. Bevis.
Fredericton, N. B	.....	.....	30.39	771.9	—10.9	—23.8	97	Calm	0	0	.....	4c	0	W	.....	0	0	Fair	Prof. Harrison.
*Fort Garry, Manitoba	.....	.....	30.74	780.8	—30	—34.4	100	S	2	0.9	.....	0	0	.....	.....	0	0	Clear	James Stewart.
Goderich, Ontario	.....	.....	30.48	774.2	19.5	— 6.9	92	Calm	.....	.....	0	10k	0	N	.....	0	0	Dull	H. J. Strang, M. A.
Granton, Ontario	29.25	742.9	30.46	773.7	16.4	— 8.7	.....	Calm	.....	.....	0	2cs	0	.....	.....	0	0	Clear	James Grant.
*Halifax, N. S	.....	.....	30.37	771.4	10	—12.2	90	W	10	4.5	.....	0	0	.....	.....	0	0	Clear	F. Allison, M. A.
Hamilton, Ontario	.....	.....	30.51	774.9	6.5	—14.2	79	SW	.....	.....	1	9cs	0	.....	.....	0	0	Cloudy	G. Dickson.
Heart's Content, N. F	.....	.....	30.15	765.8	10	—12.2	100	W	.....	.....	5	0	0	.....	.....	0	0	Very fine	E. Weedon.
*Kingston, Ontario	.....	.....	30.49	774.4	20	— 6.7	98	Calm	0	0	.....	2c	5s	W	W	Inap.	Inap.	Cloudy	S. Woods, M. A.
*Montreal, Quebec	.....	.....	30.33	771.9	14	—10.0	87	SW	16	7.2	.....	.....	10n	.....	.....	Inap.	Inap.	Cloudy	C. H. McLeod, C. E.
*Ottawa, Ontario	.....	.....	30.38	771.6	15	— 9.4	78	S	4	1.8	.....	.....	10ks	.....	SW	0	0	Cloudy	J. B. Haney.
*Parry Sound, Ontario	.....	.....	30.38	771.6	26	— 3.3	88	S	8	3.6	.....	2k	8ks	W	W	0.02	0.5	Cloudy	Rev. R. Mosley.
Port Dover, Ontario	.....	.....	30.48	774.2	17	— 8.3	98	SW	1	0.4	.....	.....	Fog	.....	SW	0	0	Foggy	H. Morgan.
Port Hastings, N. S	.....	.....	30.31	769.9	8.8	—12.9	.....	Calm	0	0	.....	.....	.....	.....	.....	0	0	Fine	Peter Grant.
Port Stanley, Ontario	.....	.....	30.48	774.2	11	—11.7	92	SE	2	0.9	.....	8k	Fog	W	.....	0	0	Cloudy	M. Payne.
*Quebec, Quebec	.....	.....	30.36	771.1	10	—12.2	79	NW	6	2.7	.....	.....	10n	.....	NW	0	0	Cloudy	Capt. Ashe, R. N.
*Rockliffe, Ontario	.....	.....	30.37	771.4	14	—10.0	96	E	2	0.9	.....	.....	10s	.....	NW	0	0	Cloudy	
St. John, N. B	.....	.....	30.42	772.7	7	—13.9	77	SW	2	0.9	.....	1c	0	.....	.....	0	0	Fine	G. Murdoch, C. E.
*Saugeen, Ontario	.....	.....	30.41	772.4	20	— 6.7	85	Calm	0	0	.....	.....	10n	.....	.....	0	0	Cloudy	K. Stewart.
Stayner, Ontario	.....	.....	30.45	773.4	14	—10.0	83	Calm	0	0	.....	.....	Haze	.....	.....	0	0	Hazy	R. J. Cole.
Stratford, Ontario	29.07	738.4	30.45	773.4	19.0	— 7.2	98	SW	3	1.3	.....	.....	10s	.....	.....	0	0	Cloudy	C. J. MacGregor, M. A.
*Sydney, C. B	.....	.....	30.30	769.6	6	—14.4	95	SW	8	3.6	.....	2ck	0	W	.....	0	0	Clear	T. C. Hill.
*Toronto, Ontario	.....	.....	30.47	773.9	14	—10.0	93	W	6	2.7	.....	5k	5ks	SW	.....	0	0	Cloudy	Magnetic Observatory.
Woodstock, Ontario	.....	.....	30.49	774.4	14.6	— 9.7	88	Calm	0	0	.....	10k	0	.....	.....	Inap.	Inap.	Cloudy	J. Montgomery.
SUB-SERIES.																			
St. Johns, Newfoundland	.....	.....	30.22	767.6	12.0	—11.1	.....	W	.....	.....	.....	5k	5s	.....	.....	0	0	Fair	John Delany.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

NOTE.—The originals for Brockville, Charlottetown, Port Dover, Port Stanley, Stayner, St. Johns, N. F. and those telegraphed, give the amount of cloudiness by the scale 0 to 4. The elevation of Granton is 1,015 feet, or 309.4 m.; Stratford, 1,182 feet, or 360.3 m.

UNITED STATES SERIES.

Furnished by the coöperation of Bvt. Brig. Gen. Albert J. Myer, Chief Signal Officer, U. S. Army.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Albany, N. Y.	.....	.....	30.52	775.2	— 2	—18.9	84	Calm	0	0	.....	0	Haze	.....	.....	0	0	Clear	
Alpena, Mich.	.....	.....	30.40	772.1	21	— 6.1	85	Calm	0	0	.....	.....	10s	.....	.....	0.01	0.3	Cloudy	
Atlantic City, N. J.	.....	.....	30.54	775.7	29	— 1.7	89	NE	4	1.8	.....	10cs	0	NW	.....	0.27	6.9	Cloudy	
Augusta, Ga.	.....	.....	30.45	773.4	51	10.6	93	NE	4	1.8	.....	.....	10s	.....	.....	0	0	Cloudy	
Baltimore, Md.	.....	.....	30.56	776.2	33	0.6	100	Calm	0	0	.....	.....	10n	.....	.....	0.75	19.1	Light rain	
Barnegat, N. J.	.....	.....	30.54	775.7	28	— 2.2	89	NW	10	4.5	.....	.....	10s	.....	W	0.57	14.5	Cloudy	
Bismarck, Dakota	28.73	729.7	30.68	779.3	—14	—25.6	72	Calm	0	0	.....	.....	10s	.....	NW	0.05	1.3	Threatening	
Boston, Mass.	.....	.....	30.40	772.1	16.5	— 8.6	83	W	2	0.9	.....	0	Sm'e	.....	.....	0	0	Clear	
Breckenridge, Minn.	.....	.....	30.68	779.3	—11	—23.9	76	NW	10	4.5	.....	.....	10s	.....	N	0	0	Cloudy	
Buffalo, N. Y.	.....	.....	30.47	773.9	12.5	—10.8	71	SW	1	0.4	.....	.....	10s	.....	.....	0	0	Cloudy	
Burlington, Vt.	.....	.....	30.40	774.4	12	—11.1	61	S	2	0.9	.....	2c	0	.....	.....	0	0	Fair	
Cairo, Ill.	.....	.....	30.45	773.4	31	— 0.6	89	Calm	0	0	.....	10cs	0	.....	.....	0	0	Cloudy	
Cape Hatteras, N. C.	.....	.....	30.39	771.9	46	7.8	100	NE	14	6.3	.....	.....	10n	.....	.....	0.06	1.5	Light mist	
Cape Henry, Va.	.....	.....	30.52	775.2	36	2.2	90	N	5	2.2	.....	.....	10s	.....	.....	0.43	10.9	Cloudy	
Cape Lookout, N. C.	.....	.....	30.47	773.9	46	7.8	100	NE	12	5.4	.....	.....	10s	.....	.....	0.03	0.8	Cloudy	
Cape May, N. J.	.....	.....	30.54	775.7	30	— 1.1	89	N	10	4.5	.....	.....	10s	.....	.....	0.31	7.9	Cloudy	
Charleston, S. C.	.....	.....	30.46	773.7	55	12.8	93	NE	3	1.3	.....	.....	Fog	.....	.....	0.03	0.8	Foggy	
Cheyenne, Wyoming	23.98	609.1	29.92	760.0	20	— 6.7	72	NW	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Chicago, Ill.	.....	.....	30.35	770.9	33	0.6	70	S	3	1.3	.....	.....	10s	.....	.....	0	0	Cloudy	
Cincinnati, Ohio.	.....	.....	30.41	772.4	31	— 0.6	89	E	3	1.3	.....	.....	Fog	.....	.....	0	0	Dense fog	
Cleveland, Ohio.	.....	.....	30.50	774.7	17	— 8.3	83	SE	7	3.1	.....	.....	10s	.....	.....	0	0	Cloudy	
Corsicana, Tex.	.....	.....	30.41	772.4	37	2.8	100	E	2	0.9	.....	.....	Fog	.....	.....	0.07	1.8	Foggy	
Davenport, Iowa.	.....	.....	30.42	772.7	26	— 3.3	88	Calm	0	0	.....	.....	10s	.....	.....	0	0	Cloudy	
Denison, Tex.	.....	.....	30.37	771.4	38	3.3	100	E	5	2.2	.....	.....	Fog	.....	.....	0.03	0.8	Foggy	
Denver, Col.	24.82	630.4	30.04	763.0	0	—17.8	85	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Detroit, Mich.	.....	.....	30.43	772.9	19	— 7.2	84	SW	3	1.3	.....	5k	5s	W	W	0	0	Cloudy	
Dodge City, Kan.	27.69	703.3	30.24	768.1	10	—12.2	78	NE	28	12.5	.....	.....	10s	.....	.....	0	0	Cloudy	
Dubuque, Iowa.	.....	.....	30.44	773.2	20	— 6.7	85	NW	1	0.4	.....	.....	10s	.....	.....	0	0	Cloudy	
Duluth, Minn.	.....	.....	30.56	776.2	1	—17.2	72	N	10	4.5	.....	0	0	.....	.....	0	0	Clear	
Eastport, Me.	.....	.....	30.40	772.1	10	—12.2	79	SW	8	3.6	.....	5c	0	W	.....	Inap.	Inap.	Fair	
Erie, Pa.	.....	.....	30.47	773.9	22	— 5.6	85	SE	8	3.6	.....	5cs	Haze	W	.....	0	0	Fair	
Escanaba, Mich.	.....	.....	30.40	773.7	13	—10.6	81	N	6	2.7	.....	0	10s	.....	W	0	0	Cloudy	
Fort Gibson, Indian Ter.	.....	.....	30.36	771.1	40	4.4	100	SE	4	1.8	.....	.....	Fog	.....	.....	0	0	Foggy	
Ft. St. Michael, Alaska.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Fort Sill, Indian Ter.	29.14	740.1	30.34	770.6	38	3.3	56	S	2	0.9	.....	.....	Fog	.....	.....	.....	.....	Foggy	
Fort Sully, Dakota.	28.77	730.7	30.71	780.0	— 3	—19.4	82	NW	6	2.7	.....	.....	10s	.....	.....	0.01	0.3	Cloudy	
Florence, Arizona.	28.54	724.9	30.09	764.3	47	8.3	.....	SW	.....	.....	.....	0	0	.....	.....	0	0	Clear	
Galveston, Tex.	.....	.....	30.37	771.4	47	8.5	100	N	6	2.7	.....	.....	Fog	.....	.....	0	0	Foggy	
Grand Haven, Mich.	.....	.....	30.39	771.9	23	— 5.0	93	E	5	2.2	.....	.....	10n	.....	.....	Inap.	Inap.	Light snow	
Indianapolis, Ind.	.....	.....	30.43	772.9	26	— 3.3	88	Calm	0	0	.....	0	Sm'e	.....	.....	0	0	Smoky	
Indianola, Tex.	.....	.....	30.37	771.4	43	6.1	100	N	8	3.6	.....	.....	10s	.....	.....	0	0	Cloudy	
Jacksonville, Fla.	.....	.....	30.42	772.7	66	18.9	94	Calm	0	0	.....	.....	Fog	.....	.....	0	0	Foggy	
Keokuk, Iowa.	.....	.....	30.36	770.9	33	0.6	100	Calm	0	0	.....	0	Fog	.....	.....	0	0	Foggy	
Key West, Fla.	.....	.....	30.34	770.6	73	22.8	85	NE	6	3.6	.....	0	0	.....	.....	0	0	Clear	
Kittyhawk, N. C.	.....	.....	30.48	774.2	39	3.9	100	N	18	8.0	.....	.....	10s	.....	.....	0.13	3.3	Cloudy	
Knoxville, Tenn.	.....	.....	30.41	772.4	45	7.2	92	Calm	0	0	.....	.....	10n	.....	.....	1.12	28.4	Light rain	
La Crosse, Wis.	.....	.....	30.49	774.4	11	—11.7	79	Calm	0	0	.....	.....	10s	.....	.....	0	0	Threatening	
Leavenworth, Kan.	.....	.....	30.43	772.9	24	— 4.4	93	N	6	2.7	.....	.....	Fog	.....	.....	0	0	Foggy	
Louisville, Ky.	.....	.....	30.44	773.2	34	1.1	100	Calm	0	0	.....	.....	Fog	.....	.....	0.02	0.5	Foggy	
Lynchburg, Va.	.....	.....	30.55	776.0	36	2.2	95	Calm	0	0	.....	.....	Fog	.....	.....	0.62	15.7	Foggy	
Malone, N. Y.	.....	.....	30.40	772.1	26	— 3.3	88	SW	8	3.6	.....	.....	10s	.....	SW	0	0	Cloudy	
Marquette, Mich.	.....	.....	30.41	772.4	18	— 7.8	68	NW	4	1.8	.....	.....	10s	.....	.....	0	0	Cloudy	
Memphis, Tenn.	.....	.....	30.46	773.7	37	2.8	100	NE	5	2.2	.....	.....	Fog	.....	.....	0.25	6.3	Foggy	
Milwaukee, Wis.	.....	.....	30.43	772.9	22	— 5.6	93	N	6	2.7	.....	.....	10n	.....	.....	0.01	0.3	Light snow	
Mobile, Ala.	.....	.....	30.39	771.9	63	17.2	100	S	4	1.8	.....	.....	Fog	.....	.....	0.08	2.0	Dense fog	
Montgomery, Ala.	.....	.....	30.38	771.6	64	17.8	94	SE	3	1.3	.....	.....	10s	.....	.....	0.81	20.6	Cloudy	
Morgantown, W. Va.	29.36	745.7	30.50	774.7	27	— 2.8	94	N	1	0.4	.....	.....	10s	.....	.....	0.02	0.5	Foggy	
Mt. Washington, N. H.	23.74	603.0	30.10	764.5	7	—13.9	77	NW	50	22.4	.....	1c	0	.....	.....	0	0	Clear	
Nashville, Tenn.	.....	.....	30.40	772.1	38	3.3	100	Calm	0	0	.....	.....	Fog	.....	.....	0.53	13.5	Foggy	
New Haven, Conn.	.....	.....	30.52	775.2	22	— 5.6	80	SW	5	2.2	.....	Haze	Fog	.....	.....	0	0	Foggy	
New London, Conn.	.....	.....	30.50	774.7	25	— 3.9	75	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
New Orleans, La.	.....	.....	30.34	770.6	58	14.4	100	Calm	0	0	.....	.....	Fog	.....	.....	1.43	36.3	Dense fog	
Newport, R. I.	.....	.....	30.50	774.7	24	— 4.4	60	SW	10	4.5	.....	0	0	.....	.....	0	0	Clear	
New York, N. Y.	.....	.....	30.54	775.7	26	— 3.3	76	W	4	1.8	.....	.....	10s	.....	W	Inap.	Inap.	Cloudy	
Norfolk, Va.	.....	.....	30.52	775.2	33.5	0.8	89	NE	12	5.4	.....	.....	10s	.....	NE	0.18	4.6	Cloudy	
North Platte, Neb.	27.38	695.4	30.30	769.6	— 2	—18.9	100	Calm	0	0	.....	.....	10s	.....	.....	0	0	Cloudy	
Omaha, Neb.	29.34	745.2	30.58	776.7	— 2	—18.9	67	N	10	4.5	.....	0	2s	.....	.....	0	0	Clear	
Oswego, N. Y.	.....	.....	30.50	774.7	7	—13.9	89	SE	8	3.6	.....	8cs	Haz	NW	.....	Inap.	Inap	Cloudy	
Pembina, Dakota.	.....	.....	30.63	778.0	—26	—32.2	52	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Philadelphia, Pa.	.....	.....	30.57	776.5	28	— 2.2	77	N	3	1.3	.....	.....	10s	.....	.....	0.03	0.8	Cloudy	
Pike's Peak, Col.	17.62	447.5	29.84	757.9	0	—17.8	70	SW	46	20.6	.....	2cs	1s	SW	.....	0	0	Fair	
Pittsburgh, Pa.	.....	.....	30.50	774.7	22	— 5.6	100	NE	2	0.9	.....	.....	Fog	.....	W	Inap.	Inap.	Foggy	
Port Huron, Mich.	.....	.....	30.44	773.2	16	— 8.9	100	Calm	0	0	.....	.....	10s	.....	.....	0	0	Cloudy	
Portland, Me.	.....	.....	30.44	773.2	5	—15.0	87	NW	4	1.8	.....	0	Haz	.....	.....	0	0	Clear	
Portland, Oregon.	.....	.....	29.71	754.6	39	3.9	90	E	8	3.6	.....	0	0	.....	.....	0.01	0.3	Clear	
Punta Rassa, Fla.	.....	.....	30.38	771.6	71.0	21.7	95	E	10	4.5	.....	0	8s	.....	E	0	0	Fair	
Rochester, N. Y.	.....	.....	30.48	774.2	13	—10.6	81	SW	9	4.0	.....	8c	Haz	W	.....	0	0	Fair	
Salt Lake City, Utah.	25.61	650.5	29.94	760.5	34	1.1	79	S	20	8.9	.....	0	2s	.....	.....	0.40	10.2	Fair	
Sandy Hook, N. J.	.....	.....	30.49	774.4	28	— 2.2	88	W	12	5.4	.....	.....	10s	.....	W	0.08	2.0	Cloudy	
San Diego, Cal.	.....	.....	30.15	765.8	54	12.2	73	SE	4	1.8	.....	.....	10s	.....	SE	0.05	1.3	Cloudy	
San Francisco, Cal.	.....	.....	29.79	756.7	51	10.6	78	S	12	5.4	.....	.....	10s	.....	S	0.57	14.5	Cloudy	
Santa Fé, N. M.	23.39	594.1	29.93	760.2	28	— 2.2	67	NE	2	0.9	.....	0	2s	.....	.....	0	0	Clear	
Savannah, Ga.	.....	.....	30.45	773.4	60	15.6	100	SE	4	1.8	.....	.....	Fog	.....	.....	0	0	Foggy	
Shreveport, La.	.....	.....	30.47	773.9	39	3.9	100	Calm	0	0	.....	.....	Fog	.....	.....	0	0	Foggy	
Smithville, N. C.	.....	.....	30.49	774.4	47	8.3	92	NE	2	0.9	.....	.....	Fog	.....	.....	0.05	1.3	Foggy	
Springfield, Mass.	.....	.....	30.51	774.9	9	—12.8	77	Calm	0	0	.....	0	5s	.....	.....	0	0	Fair	
St. Louis, Mo.	.....	.....	30.43	772.9	38	3.3	72	S	4	1.8	.....	.....	10s	.....	.....	0	0	Cloudy	
St. Marks, Fla.	.....	.....	30.43	772.9	62	16.7	100	SE	1	0.4	.....	.....	Fog	.....	.....	0.04	1.0	Foggy	
St. Paul, Minn.	.....	.....	30.50	774.7	7	—13.9	80	N	8	3.6	.....	0	1s	.....	.....	0	0	Clear	
St. Paul's Island, Alaska.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Thatcher's Island, Mass.	.....	.....	30.47	773.9	18	— 7.8	52	W	8	3.6	.....	0	0	.....	.....	0	0	Clear	
Toledo, Ohio.	.....	.....	30.45	773.4	22	— 5.6	72	SE	4	1.8	.....	Haze	Sm'e	.....	.....	0	0	Smoky	
Tucson, Arizona.	27.62	701.5	30.17	766.3	28	— 2.2	.....	SE	.....	.....	.....	0	0	.....	.....	0	0	Clear	
Tybee Island, Ga.	.....	.....	30.45	773.4	54	12.2	100	SE	4	1.8	.....	.....	Fog	.....	.....	0	0	Foggy	
Vicksburg, Miss.	.....	.....	30.43	772.9	45	7.2	100	Calm	0	0	.....	.....	Fog	.....	NE	0.06	1.5	Foggy	
Virginia City, M. T.	24.18	614.2	29.66	753.4	— 4	—20.0	.....	E	2	0.9	.....	.....	10ks	.....	NW	0.01	0.3	Cloudy	
Washington, D. C.	.....	.....	30.57	776.5	30.5	— 0.8	93	NE	2	0.9	.....	.....	10fog	.....	.....	0.51	13.0	Light rain	
Wilmington, N. C.	.....	.....	30.48	774.2	45	7.2	92	N	5	2.2	.....	.....	Fog	.....	.....	0.02	0.5	Foggy	

UNITED STATES SERIES.—Continued.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Wood's Holl, Mass.	.....	.....	30.51	774.9	24	— 4.4	86	NW	5	2.2	.....	0	0	.....	.....	0	0	Clear	
Yankton, Dakota	29.19	741.4	30.72	780.3	—12	—24.4	50	NW	7	3.1	.....	0	0	.....	.....	0	0	Clear	
Yuma, Arizona	.....	.....	30.17	766.3	46	7.8	.....	N	.....	.....	.....	0	5s	.....	NW	0	0	Fair	
Sub-Series.																			
Kingston, Jamaica, W. I.	.....	.....	30.33	770.4	74	23.3	76	Calm	0	0	.....	2c	2s	.....	.....	0	0	.....	James Gall.
Navassa, W. I.	.....	.....	.....	.....	80	26.7	.....	NE	.....	.....	2	.....	.....	.....	.....	0	0	Clear	F. M. Everett.
Clifton, Ja., W. I.	27.30	693.4	30.11	764.8	66	18.9	78	E	3.0	1.3	.....	2c	0	E	.....	0	0	Fine	C. Partridge.
Paramaribo, D. Guiana, S. A.	.....	.....	30.03	762.7	81	27.2	83	E	.....	.....	2	5k	4k	E	.....	0	0	Fair	C. J. Hering.
Batavia, Dutch Guiana, S. A.	30.03	762.8	.....	.....	79 7	26.5	.....	E	.....	.....	.....	.....	.....	.....	.....	0	0	Cloudy	Dr. H. Groot.
Medellin, Colombia, S. A.	25.24	641.1	.....	.....	68 0	20.0	76	SW	.....	.....	2	1cs	2ks	.....	.....	0	0	Fair	Thomas Herran.
York Factory, B. A.	.....	.....	29.92	760.0	—37.0	—38.3	.....	W	6	2.7	.....	1c	0	N	.....	0	0	Fair	J. Fortescue, W. Wood.
Honolulu, Oahu, H. I.	.....	.....	29.96	761.0	71	21.7	95	W	.....	.....	3	.....	.....	.....	.....	0.22	5.6	Clearing	Daniel Smith.
Makawao, Maui, H. I.	.....	.....	29.94	760.5	60	15.6	82	NE	.....	.....	1	0	0	.....	.....	0	0	.....	F. L. Clarke.

Note.—The originals give the amount of cloudiness by the scale 0 to 4, except York Factory, Makawao, Medellin and Paramaribo. The elevation of the barometer at Bismarck is 1,677 feet, or 511.1 meters; Cheyenne, 6,057.3 ft., or 1,846.2 m.; Clifton, about 2,892 ft. or 881.5 m.; Denver, 5,135 ft., or 1,565.2 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Florence, 1,550 (?) ft. or 472.5 (?) m.; Makawao, 2,205 ft., or 672.1 m.; Morgantown, 1,027.9 ft., or 313.3 m.; Medellin, 4,876 ft., or 1,486.2 m.; Mt. Washington, 6,285 ft., or 1,915.6 m.; North Platte, 2,846 ft.. or 867.4 m.; Omaha, 1,054.6 ft., or 321.4 m.; Pike's Peak, 14,150.7 ft., or 4,313.1 m.; Salt Lake City, 4,362.2 ft., or 1,329.6 m.; Santa Fé, 6,862.2 (?) ft., or 2,091.6 (?) m.; Tucson, 2,513 (?) ft., or 772.1 (?) m.; Virginia City, 5,480 (?) ft.. or 1,670.3 (?) m.; Yankton, 1,278 ft., or 389.5 m. The following constants are added in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Denver, 5.22 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fé, 6.64 in.; Tucson, 2.59 in.; Virginia City, 5.48 in. The elevation of Batavia is about 6 feet; the barometric readings need the addition of 0.2 mm. or 0.01 in. for reduction to sea-level.

UNITED STATES NAVAL SERIES.

By authority of the **SECRETARY OF THE NAVY.**

Furnished by the coöperation of the Navy Department, through Commodore Daniel Ammen, U. S. N., Chief of Bureau of Navigation.

STATIONS AND VESSELS.	True course toward—	Hourly rate in knots.	*Barometer as reported.		Temperature of the Air.		Relative Humidity.	Wind.				Clouds.				Rain-fall or melted snow in the past 24 hours.		State of Ocean.	Direction of swell from—	Weather.	Observer.
								Direction.	Velocity		Force.	Amount.		Direction.							
												Up'er	Low'r	Up'er	Low'r						
			Inches.	Millimeters.	Fahrenheit.	Centigrade.	Per cent.	From—	Miles per hour.	Meters per second.	0—10.	0—10.	0—10.	From—	From—	Inches.	Millimeters.				
Naval Academy, Annapolis, Md.			30.16	766.1	31	— 0.6	92	N			1		10			0.20	5.1			Fog & sleet.	
Naval Hospital, Annapolis, Md.			30.52	775.2	30	— 1.1	100	N			1		10			0.20	5.1			Rain & snow	
Navy Yard, Mare Island, Cal.			29.88	758.9	50	10.0	96	SE			1		10							Rainy.	
Navy Yard, Norfolk, Va.			30.58†	776.7†	34	1.1		NNE			5		10n							Drizzling.	
Navy Yard, Pensacola, Fla.			30.45	773.4	63	17.2	94	NE			1		Fog			0	0			Dense fog.	
Navy Yard, Portsmouth, N.H.			30.43	772.9	4	—15.6		NW			2		0							Clear	
Adams, Port Royal, S. C.			30.49	774.4	60	15.6	94	E			2									Foggy	
Ajax, Port Royal, S. C.			30.04	763.0	57	13.9		ENE			1		10		ENE					Dense fog.	
Canonicus, New Orleans, La.			30.00†	763.5†	56	13.3		Calm			0									Foggy	
Catskill, Port Royal, S. C.			30.40†	772.1†	55	12.8		E			3							Ripp-ling.		Foggy	
Colorado, New York, N. Y.			30.63	778.0	27	— 2.8		W			1		0			0	0			Hazy	
Dictator, Port Royal, S. C.			30.50	774.7	55	12.8	100	ENE			1		Fog			0	0			Misty	
Essex, Norfolk, Va.			30.53	775.4	40	4.4	91	NNE			3		10							Raining	
Hartford, Hampton Roads, Va.			30.62	777.7	35	1.7		N			2		10		E	0.125	3.18	Moder-ate	E	Overcast	
Huron, Port Royal, S. C.			30.51	774.9	60	15.6	97	E			1–2		0							Foggy	
Lehigh, Port Royal, S. C.			30.65†	778.5†	56	13.3	87	SE			1									Dense fog.	
Manhattan, Port Royal, S. C.			30.44†	773.2†	56	13.3		E			2							Smooth		Fog & mist.	
Michigan, Erie, Pa.			30.25	768.3	22	— 5.6	79	ESE			2		1		SE					Clear	
Monongahela, Baltimore, Md.			30.52	775.2	36	2.2		E			0–1		..n							Misty	
New Hampshire, Port Royal, S. C.			30.66	778.7	60	15.6	94	Calm			0		Fog					Smooth		Dense fog.	
Ossipee, New Orleans, La.			30.36	771.1	57	13.9		Calm			0									Foggy	
Santee, Annapolis, Md.			30.06	763.5	31	— 0.6		N			1		10							Fog & sleet.	
St. Louis, League Island, Pa.			30.39	771.9	30.5	— 0.8		NW			1		10		E	0.275	6.99			Overcast	
Tallapoosa, Washington, D. C.			30.44	773.2	31	— 0.6	89	Calm			0		10							Fog & mist.	
Wabash, Boston, Mass.			30.52	775.2	16	— 8.9		W			1–2		2							Hazy	
Wyoming, Washington, D. C.			30.94‡	785.9†	31	— 0.6		Calm			0		10							Misty	

* It is not known that the barometer is corrected for temperature, instrumental error or elevation. † Aneroid Barometer. ‡ Detached clouds.

UNITED STATES MARINE SERIES

REPORTED TO THE OFFICE OF THE CHIEF SIGNAL OFFICER OF THE ARMY.

NAMES OF VESSELS.	True course toward—	Hourly rate in knots.	Barometer reduced to sea-level.		Temperature of the Air.		Relative Humidity.	Wind.				Clouds.				State of Ocean.	Direction of swell from—	Weather.	Observer.
								Direction.	Velocity.		Force.	Amount.		Direction.					
												Up'er	Low't	Upper.	Lower.				
			Inches.	Millimeters.	Fahrenheit.	Centigrade.	Per cent.	From—	Miles per hour.	Meters per second.	0—10.	0—10.	0—10.	From—	From—				
PACIFIC MAIL S. S. CO. MARINE SERIES.																			
Furnished by the coöperation of ————, President; Williams, Blanchard & Co., Agents.																			
OCCIDENTAL AND ORIENTAL S. S. CO. MARINE SERIES.																			
Furnished by the coöperation of George H. Bradbury, President; T. H. Goodman, Agent.																			
NORTH GERMAN LLOYD OF BREMEN MARINE SERIES.																			
Furnished by the coöperation of A. Schumacher & Co., Agents.																			
Steamer Nürnberg, N. 47°, 57′, W. 30°, 48′	SW by W½W		29.39	746.5	39.9	4.4		NW			4–6		k		NW			Snow-squalls	Capt. A. Jaeger.
MARINE SERIES. (Miscellaneous.)																			
Furnished by the coöperation of Captain James Jorgensen.																			
Schooner Addie Fuller, N. 34°, 18′, W. 76°, 13′	SW	2.5	30.36	771.1	59	15.0	94	NNE	8	3.6		d.	Vapor.				Rough.		Foggy	Capt. James Jorgensen.

NOTE.—The schooner Addie Fuller gives the amount of cloudiness by the scale 0 to 4.

COLLATED AT THE OFFICE OF THE CHIEF SIGNAL OFFICER OF THE ARMY, WASHINGTON, D. C.

The records which appear in this Bulletin are copied from the regular exchanges of this office, made in each instance in compliance with an especial request and are published for the uses of the coöperating observers. The barometric readings in the first two columns are reduced to freezing and their respective standards; those in the second two also to mean sea-level. The "weather" is generally published as given.

When the distinction between the upper and lower strata of clouds is not reported, the *kinds* or *types*, viz: cirrus, cumulus, stratus, nimbus, scud, fracto, pallio, haze, fog and smoke, as indicated, respectively, by the letters c, k, s, n, d, f, p, hz., fg. and sm'e, are generally published with the amount in the lower-cloud column. The distinction between the upper and lower strata is carefully made in the United States Series and a portion of the Canadian Series, and the types are indicated by the above letters or their combinations in the proper column.

Albert J. Myer

Brig. Gen. (Bv't, Asag'd,) Chief Signal Officer, U. S. A.

BULLETIN

OF

INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON JANUARY 19, 1877.

7:35 A. M. WASHINGTON mean time.

6:7 A. M. MEXICO mean time.
7:7 A. M. SAN JOSE mean time.
0:6 P. M. LISBON mean time.
0:28 P. M. MADRID mean time.
0:43 P. M. GREENWICH mean time.
0:53 P. M. PARIS mean time.
1:1 P. M. BRUSSELS mean time.
1:4 P. M. UTRECHT mean time.
1:18 P. M. BERNE mean time.

1:26 P. M. CHRISTIANIA mean time.
1:33 P. M. COPENHAGEN mean time.
1:33 P. M. ROME mean time.
1:37 P. M. BERLIN mean time.
1:49 P. M. VIENNA mean time.
1:55 P. M. STOCKHOLM mean time.
2:18 P. M. ATHENS mean time.
2:39 P. M. CONSTANTINOPLE mean time.
2:44 P. M. ST. PETERSBURG mean time.

10:2 P. M. TOKEI mean time.

ALGERIAN SERIES.

Furnished by the coöperation of General d'Eudeville, Commandant Supérieur du Génie in Algeria.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Nemours			30.32	770.1	61.9	16.6	56	Calm			0		3			0	0	Fair	Charnot.
Algiers			30.35	770.9	52.0	11.1		SW			2		4			Inap.	Inap.	Fair	Peter.
La Calle			30.32	770.2	58.6	14.8	52	N			2		2			0	0	Clear	Fleury.
Tunis			30.35	770.8	57.2	14.0		NW			3		6			0	0	Fair	Jacques.
Sfax																			
Saida			30.27	768.9	53.6	12.0	45	ENE			1		2			0	0	Clear	Millot.
Tebessa			30.28	769.0	41.5	5.3		W			1		2			0	0	Clear	Bourgeois.
Geriville			30.34	770.5	48.2	9.0	38	NNW			3		0			0	0	Clear	Lemaillot.
Laghouat			30.24	768.1	53.6	12.0	41	W			1		1			0	0	Clear	Guyot.
Biskra			30.26	768.6	61 0	16.1	52	NE			2		4			0	0	Fair	Kuntz.

NOTE.—In the originals the distinction between the amount of upper and lower clouds is apparently not made. The weather is published as given. The rain-fall is measured at 7 a. m., local time.

AUSTRIAN SERIES.

Furnished by the cooperation of Professor Ferdinand Osnaghi, Director of the Imperial and Royal Central Meteorological Institute at Vienna.

Agram			30.40	772.2	39.4	4.1	65	SW			2	7			0	0		Prof. Ivan Stozir.
Cracow, I. R. Observatory			30.39	771.9	32.4	0.2	92	E			1	10			0.016	0.4		Dr. Wierzbiski.
Eperies			30.33	770 3	32.9	0.5	80	N			2	10s		S	0	0		Julius Mikolik.
Gratz															0	0		Andreas Rospini.
Hermannstadt	29.08	738.5	30.39	772.0	36.0	2.2	75	SSW			3	0						
Kremsmünster	28.78	730.9	30.28	769.0	31.6	— 0.2	94	E			1	10			0.138	3.50	Snowing	Prof. Reissenberger
Lemberg	28.97	735.8	30.40	772.2	27.3	— 2.6	96	E			2	10			0	0		Prof. C. Wagner.
Nyiregyhaza			30.38	771.7	21.2	— 6.0	98	NE			1	6			0	0		Dr. T. Stanecki.
Pola																		Habzsuda Daniel.
Szegedin			30.30	769.5	45.9	7.7	65	NW			3	0			0	0		I.R.Hydrographic Of'ce.
Trieste			30.32	770.2	36.5	2.5	79	Calm			0	10			0	0		Karl Stancel.
Vienna			30.33	770.3	45.5	7.5	65	W			1	0			0	0	Clear	Prof. V. Farolfi.
			30.39	771.8	34.5	1.4	82	Calm			0	10			0	0		I. R. Central Met. Obs'y.

NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 7 p. m., local time. The elevation of Gratz is 343.5 meters, or 1,126.9 feet: Hermannstadt, 407.8 meters, or 1,337.9 feet; Kremsmünster, 383.6 meters, or 1,258.5 feet.

BELGIAN SERIES.

Furnished by the cooperation of J. C. Houzeau, Director of the Royal Observatory at Brussels.

Arlon			30.26	768.5	38.3	3.5	94	SW			2	10			0	0			
Brussels			30.06	763.4	50.2	10.1	77	SSW			3	10		SW	0.004	0 10	Covered	Royal Observatory.	
Furnes			29.95	760.6	54.1	12.3	79	S			5	5			0.126	3 2			
Maeseyck			30.07	763.8	49.5	9.7	81	SSW			5	10			0.008	0.2			

NOTE.—In the originals, the weather is occasionally given in general notes.

BRITISH SERIES

Furnished by the coöperation of Robert H. Scott, Esq., Director of the Meteorological Office, London, Alexander Buchan, Secretary of the Scottish Meteorological Society, Edinburgh, and the respective Observers.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Aberdeen			29.32	744.7	43.4	6.3		E	9	4.0			10			0.25	6.48	Raining	William Boswell.
Ardrossan			29.22	742.2	49	9.4		SE			3		4					*D. clouds	William McNeil.
Armagh, Observatory			29.34	745.2	48.7	9.3		SSW	22	9.8			8					Squally	S. Call, for Dr. Robinson
Birr Castle, (Parsonstown)			29.27	743.4	49.0	9.4		SSW			1-2		2					*D. clouds	J. Dreyer.
Bradford			29.48	748.8	57.3	14.1		S			3		9			0.16	4.1	Showery	J. McLandsborough.
Bridgetown, (Barbados)			30.06	763.5	84	28.9		E			2		8					Overcast	Sergt. J. F. Halanen, A.
Cambridge, Observatory			29.74	755.4	56.0	13 3		S			4		7			Blank	Blank	*D. clouds	H. Todd. [H.C.
Cardington			29.73	755.1	56.6	13.7		SW			6		9					Overcast	John McLaren.
Carlisle																			T. Bell, for J. Cartmell.
Chatham, School M. E.			29.82	757.4	53.5	11.9		SE			4		10					Drizzling	Maj. C. N. Martin, R.E.
Dartmoor	28.31	719.1	29.82	757.4	48.0	8.9		SW			6		10					Squally	R. E. Power.
Davos Platz, (Switzerland)	25.01	635.2			32.0	0.0	53	Calm			0		0			0	0	Blue sky	Francis Redford, M. A.
Donaghadee			29.24	742.7	50	10.0		SW			6		10					Raining	J. Mac Gowan.
Dover			29.90	759.4	52	11.1		SW			5		5					⅛ clouded	J. Costello.
Eccles, (near Manchester)			29.49	749.0	56.3	13.5		SSW	7.2	3.2			10					Overcast	Thomas Mackereth.
Falmouth, Observatory			29.75	755.6	52.8	11.6		SW			7		4					*D. clouds	The Staff.
Fort Napier, (Natal)	27.72	704.1	29.95	760.7	75.4	24.1		E			2		10					Overcast	P'vt. G. Salmon, A. H. C
Free Town, (Sierra Leone)			29.90	759.4	86	30.0		Calm			0		4					*D. clouds	
Galway, Queen's College			29.50	749.3	42	5.6		W			1		3					*D. clouds	Prof. A. H. Curtis.
Gibraltar, (Mediterranean)			30.28	769.1	61.8	16.6		E			2		1					Blue sky	Corpl. C. Aitken, A.H.C.
Glasgow, Observatory			29.19	741.4	47.3	8.5		S			2		10					Raining	Lewis Stuart.
Great Yarmouth			29.79	756.7	53	11.7		SW			5		6					*D. clouds	G. T. Watson.
Greenwich, Royal Obs'y			29.82	757.4	54.3	12.4		SW			4		10					Drizzling	The Staff, for G. B. Airy.
Guernsey			29.87	758.7	55	12.8		ESE			6		10					Raining	Dr. S. E. Hoskins.
Helston			29.82	757.4	54	12.2		S			7		4ck			0.30	7.6	Fine	M. P. Moyle.
Holyhead			29.42	747 3	51	10.6		SSW			7		10					Misty	John Tilston.
Kew, Observatory			29.80	756.9	54.5	12.5		SSW	31	13.9			10					Threat'ning	The Staff.
Kingstown			29.33	745.0	51	10.6		SW			4		5					*D. clouds	George Mitchell.
Leicester Museum			29.78	756.4	56.2	13.4		SW			7		10					Squally	Wm. J. Harrison, F.G.S.
Malta, (Mediterranean)			30.20	767.1	68.8	14.9		NW			4		6k					*D. clouds	Corp'l. P. Bravis, A.H.C.
Nairn			29.27	743.4	38	3.3		SW			2		10					Raining	W. D. Penny.
Nassau, (Bahamas)			30.24	768.1	73	22.8		NE			2		2					*D. clouds	Surg. Maj. Henry.
Nottingham, Observatory			29.63	752.6	57.7	14.3		SSW			6		10k,d		SSW	0	0	Overcast	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			29.59	751.6	53.9	12.2		SSW			7		10					Raining	Rev. Stephen Whitty.
Oxford, Radcliffe Obs'y			29.72	754.9	55	12.8		S			6		10					Drizzling	J. Lucas.
Plymouth			29.77	756.1	52.3	11.3		SW			6		10					Overcast	John Merrifield.
Roche's Point			29.36	745.7	51	10.6		SW			7		8					¾ clouded	W. Kennedy.
Saint Ann's Head			29.53	750.0	50	10.0		SW			8		5					*D. clouds	John C. Walker.
Saint Helier, (Jersey)			29.92	760.0	55.0	12.8		SW			6		10					Overcast	A. P. Amy.
Sandwick Manse, (Orkneys)			29.36	745.7	38.6	3.7		SE	3	1.3			10					Misty	Rev. C. Clouston, LL. D.
Scarborough																			F. Shaw.
Scutari Cemetery, (Turkey)			30.21	767.3	41.0	5.0		NE			2		10					Drizzling	Sergt. W. H. Lyne.
Sheffield			29.54	750.3	56.6	13.7		SW			6		10			0.012	0.33	Overcast	W. F. Cooper.
Silloth Rectory			29.35	745.5	51.4	10.8	92	SW			6		2			0.05	1.40	*D. clouds	Rev. Francis Redford.
Stonyhurst, Observatory			29.48	748.8	52.0	11.1		S			4		10					Squally	Rev. S. J. Perry.
Stornoway, Lews C., (Hebr.)			29.30	744.2	38	3.3		WNW			1		10					Overcast	John Smith.
Stratfield Turgiss			29.79	756.7	54.8	12.7		SW			3		10					Raining	Rev. Charles H. Griffith
Thurso			29.31	744.5	38	3.3		Calm			0		10					Raining	John Trotter.
Truro, Royal Institution			29.82	757.4	56	13.3		W			6		4					*D. clouds	W. Newcombe.
Valencia, Observatory			29.52	749.8	43.3	6.3		NW	33	14.8			10					Raining	The Staff.
SUB-SERIES.																			
Calf of Man, (Isle of Man)					40	4.4		SSW			7		5			0.35	8.9		Henry Mercer.
Cape Good Hope, Obs'y			30.01	762.2	79.0	26.1	56	S	37	16.5		0	1						The Staff, for E. J. Stone.
Hobart Town, (Tasmania)			29.72	754.9	69.0	20.6	94	W			2		0			0	0		Francis Abbott, F, R.A.S.
Leith, Restalrig Park			29.29	744.0	44.8	7.1		SE			1		8k			0.27	6.9		Andrew Gibb.
Mauritius, Observatory			29.98	761.5	84.9	29.4	56	NE	13.9	6.2		1	2		NE	0.12	3.0	*D. clouds	C. Meldrum.
Melbourne, Observatory			29.99	761.7	58.2	14.6	58	SE	6	2.7			6			0	0	Fine	R. L. J. Ellery.
Monach L't-house, (Hebrides)			29.36	745.7	44	6.7		S			3		10			0.3	7.6		J. Youngclause.
North Unst, (Shetland Is.)			29.44	747.8	44	6.7		S			4		10						Robert Burnet.

NOTE.—Generally, the originals do not give the relative humidity, rain-fall, or distinction between upper and lower clouds. The originals give the wind direction to 32 points and weather by the Beaufort notation. The originals give the barometer for Aberdeen, Cardington, Galway, Oxford, St. Helier, Sandwick, Scarborough, Stonyhurst, Leith, Monach and North Unst as read off and the cloudiness for Stornoway by the scale 0 to 4. The wind-force is given by the scale 0 to 12 in the official series; 0 to 6 in the sub-series; except in lbs. per square foot for Greenwich and Hobart Town. The rain-fall is measured at Aberdeen at 10 a. m.; Bradford, 9 a. m.; Nottingham, 7:30 a. m.; Nottingham, 6 p. m.; Mauritius, 9 a. m., local time. The elevation of Dartmoor is 1,400 feet, or 426.7 meters; Davos Platz, 5,1052 feet, or 1,556.02 meters; Fort Napier, 2,200 feet, or 670.6 meters. *Detached clouds.

By authority of the MINISTER OF FOREIGN AFFAIRS.

COSTA RICA SERIES.

Furnished by the coöperation of Senor Federico Maison, Director of the Central Office of Statistics and Meteorology.

San José																			

DANISH SERIES.

Furnished by the co peration of Captain N. Hoffmeyer, Director of the Royal Danish Meteorological Institute at Copenhagen.

Copenhagen			30.20	767.0	34.0	1.1	79	SSE			7		10						
Fanöe			29.96	760.9	35.1	1.7	98	S			6		10					Raining	
Godthaab, (Greenland)			28.87	733.4	7.5	-13.6	71	NE			4		8						
Stykkisholm, (Iceland)			28.46	722.9	35.4	1.9	82	SE			8		8						
Thorshavn, (Faröe)			29.30	744.2	39.6	4.2	80	SW			2		5					Raining	
Vestervig			29.89	759.2	33.4	0.8	100	SE			6		10					Raining	

NOTE.—The originals give the wind-force by the scale 0 to 6; occasionally, weather by Vienna symbols; no distinction between the amount of upper and lower clouds.

FRENCH SERIES.

Furnished by the co-operation of His Excellency, U. J. Le Verrier, Director of the Paris Observatory, and the respective Observers.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters	Weather.	Observer.
Alençon	.....	.....	30.11	764.8	46.2	9	79	SW	.....	.....	2	.....	8kn	.....	SW	0	0	Very cloudy	Normal School.
Amiens	.....	.....	30.10	764.6	54.3	12.4	80	SW	.....	.....	3	.....	8	.....	SW	0.094	2.4	Very cloudy	Normal School.
Avignon	.....	.....	30.35	771.0	46.4	8	61	N	.....	.....	1	.....	0	.....	.....	0	0	Very clear...	Normal School.
Bar-sur-Seine	.....	.....	30.21	767 4	49.1	9.5	66	S	.....	.....	2	.....	10	.....	.....	0	0	Covered	C. Saillard.
Beaumette, (near Angers)	.....	.....	30.12	765.0	52.0	11.1	70	S	5.8	2.6	.....	.....	.....	.....	SW	0	0	.....	Beaumette Observ'tory.
Beauvais	.....	.....	30.02	762.6	54.0	12.2	70	SSW	.....	.....	3	.....	8	.....	WNW	0.010	0.25	Very cloudy	Normal School.
Besançon	.....	.....	30.33	770.3	40.1	4.5	70	SSE	.....	.....	2	.....	0	.....	.....	0	0	Clear	Normal School.
Bourg en Bresse	.....	.....	30.35	770.8	46.6	8.1	64	S	.....	.....	4	2c	.....	N	.....	0	0	Slightly cl'dy	Normal School.
Bourges	.....	.....	30.20	767.0	50.0	10	76	SE	.....	.....	2	.....	2	.....	SE	0.012	0.3	Slightly cl'dy	Normal School.
Brest	.....	.....	29.86	758.4	53.4	11.9	90	SW	.....	.....	6	.....	10	.....	SW	0.138	3.50	Raining.....	Naval Observatory.
Carcassonne	.....	.....	30.28	769.0	49.6	9.8	74	E	.....	.....	1	.....	2	.....	W	0	0	Slightly cl'dy	Normal School.
Caen	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Chartres	.....	.....	30.13	765.4	53.1	11.7	83	SSW	.....	.....	2	.....	2	.....	NE	0.059	1.5	.....	Normal School.
Châlons-sur-Marne	.....	.....	30.20	767.0	49.3	9.6	73	SSE	.....	.....	3	.....	5ck	.....	NE	0	0	Cloudy.....	Normal School.
Clermont	.....	.....	30.23	767.7	50.2	10.1	72	S	.....	.....	2	.....	0	.....	.....	0	0	Clear.....	Puy de Dome Obs'y.
Commercy	.....	.....	30.24	768.2	40.1	4.5	85	SE	.....	.....	1	.....	10	.....	.....	0	0	Covered	Normal School.
Commune de Gréasque*	.....	.....	30.36	771.2	47.7	8.7	52	NW	.....	.....	2	.....	2	.....	SW	0	0	.....	M. Kina.
Grenoble	.....	.....	30.35	770.9	38.5	3.6	87	ENE	.....	.....	1	.....	0	.....	.....	0	0	Clear.....	Normal School.
La Roche-sur-Yon	.....	.....	30.15	765.8	49.8	9.9	86	SE	.....	.....	2	.....	2	.....	NW	0	0	Slightly cl'dy	Normal School.
Le Mans	.....	.....	30.12	765.1	52.2	11.2	75	SW	.....	.....	3	.....	5	.....	SW	0.020	0.5	C oudy.....	Normal School.
Lons-Le-Saulnier	.....	.....	30.30	769.7	41.2	5.1	66	NNW	.....	.....	1	.....	0	.....	.....	0	0	Clear	Normal School.
Lorient	.....	.....	30.02	762.6	55.4	13.0	84	SW	.....	.....	6	.....	10	.....	.....	0.780	19.8	Raining.....	Naval Observatory.
Mâcon	.....	.....	30.29	769.3	41.0	5	90	NW	.....	.....	1	.....	.....	.....	.....	0	0	Misty.....	Normal School.
Metz	.....	.....	30.31	769.8	39.9	4.4	85	SE	.....	.....	2	.....	10	.....	.....	0	0	Foggy	M. Schuster.
Mirecourt	.....	.....	30.32	770.1	41.4	5.2	69	S	.....	.....	2	.....	8	.....	E	0	0	Almost cov'd	Normal School.
Nismes	.....	.....	30.31	769.9	51.8	11	83	SE	.....	.....	2	.....	0	.....	.....	0	0	Clear	Normal School.
Orleans	.....	.....	30.13	765.4	54.0	12.2	65	S	.....	.....	2	.....	0	.....	.....	0	0	Clear	Normal School.
Paris, Observatory	.....	.....	30.14	765.5	54.1	12.3	68	SW	.....	.....	2	.....	2	.....	.....	0.009	0.24	Slightly cl'dy	National Observatory.
Parthenay	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Privas	.....	.....	30.32	770.2	47.8	8.8	.....	SSW	.....	.....	2	.....	2	.....	SSW	0	0	Slightly cl'dy	Normal School.
Rochefort, Observatory	.....	.....	30.15	765.8	52.7	11.5	51	SE	.....	.....	3	.....	5	.....	NW	0	0	⅛ covered...	Naval Observatory.
Rouen	.....	.....	30.07	763.8	55.6	13.1	71	SSE	.....	.....	2	.....	10	.....	.....	0.047	1.2	Covered	Normal School.
Saint Lo	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Tarbes	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0	0	Clear	Normal School.
Villefranche	29.10	739.2	30.19	766.7	57.2	14	86	W	.....	.....	2	.....	0	.....	.....	0	0	Clear	Normal School.
	.....	.....	30.29	769.4	45.0	7.2	79	SSE	.....	.....	1	.....	5	.....	.....	0	0	Cloudy.....	Normal School.
SUB-SERIES.																			
Fort de France, Martinique	.....	.....	29.93	760.1	77.0	25	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	L'Abbé Marchési.
Marseilles	.....	.....	30.31	769.9	54.5	12.5	52	ENE	.....	.....	1	.....	3	.....	.....	0	0	Partly cl'dy.	Marseilles Observatory.
Mont-Louis	24.99	634.8	30.31	769.8	40.8	4.9	49	SW	13.0	5.83	.....	.....	5	.....	N	0	0	.....	—. Falguère.
Montsouris, Paris	.....	.....	30.12	765.1	54.5	12.5	68	SW	.....	.....	4	.....	3	.....	SW	0.012	0.3	.....	Montsouris Observatory
Perpignan	.....	.....	30.27	768.8	52.3	11.3	71	SE	8.7	1.67	.....	.....	1	.....	N	0	0	.....	Dr. Fines.
Pic du Midi, (Summit,) H. P.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. Baylac.
Pic du Midi, (Plantade,) H. P.	22.62	574.5	.....	.....	45.1	7.3	.....	S	.....	.....	1	.....	3	.....	.....	0	0	Fair	General de Nansouty.
Saint Maur, (near Paris)	.....	.....	30.14?	765.5?	56.7	13.7	66	SSW	.....	.....	2	.....	2	.....	.....	0.031?	0.8?	Clear	E. Renou.
Toulouse	.....	.....	30.24	768.0	51.1	10.6	68	SSE	.....	.....	4	.....	4	.....	.....	0	0	.....	Toulouse Observatory.
Tours	.....	.....	30.15	765.8	51.8	11.0	71	SW	.....	.....	1	.....	7	.....	W	0.004	0.1	.....	C. Marquet.
Versailles, (near Paris)	.....	.....	30.14	765.5	54.7	12.6	68	SW	.....	.....	2	.....	7	.....	.....	0.011	0.29	Fair.....	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai)	.....	.....	30.19	766.7	46.6	8.1	95	NW	8.9	4.00	.....	.....	10	.....	.....	0.201	5.1	Rainy.....	Marc Dechevrens, S. J.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—Generally, the originals give the wind-force by the scale 0 to 7; no distinction between upper and lower clouds, and, in the official series, the amount by the scale 0 to 4; the rain-fall as measured at 7, 8 or 9 a. m., local time; at Clermont, 9 a. m. of the following day; the weather in general terms as published. The elevation of Clermont is 388 meters, or 1,272.9 feet; Commune de Gréasque, 322 meters, or 1,056.4 feet; Tarbes, 308 meters, or 1,010 feet; Mont-Louis, 1,580.40 meters, or 5,204.8 feet; Pic du Midi, (Summit,) 2,877 meters, or 9,439.1 feet; Pic du Midi, (Plantade,) 2,366 meters, or 7,762.6 feet. In correcting the Mont-Louis barometric observations for altitude, the constant 135. millimeters has been added. *Bouches-du-Rhône

GERMAN SERIES.

Furnished by the coöperation of Professor Dr. G. Neumayer, Director of the German Naval Observatory, Hamburg.

Bamberg	.....	.....	30.24	768.0	37.4	3.0	54	SW	.....	.....	3	.....	5	W	.....	0	0	.....	Prof. T. Hoh
Berlin	.....	.....	30.29	769.4	37.9	3.3	83	S	.....	.....	2	.....	8	.....	.....	0	0	.....	Prof. Arndt.
Breslau	.....	.....	30.37	771.4	34.7	1.4	90	ESE	.....	.....	2	.....	2	SE	.....	0	0	.....	Royal University Obs'y.
Carlsruhe	.....	.....	30.33	770.4	37.4	3.0	72	Calm	.....	.....	0	.....	10	.....	.....	0	0	.....	A. Senz.
Cassel	.....	.....	30.22	767.6	39.1	4.4	76	SE	.....	.....	5	.....	10	SSW	.....	0	0	.....	Dr. H. Möhl.
Crefeld	.....	.....	30.08	764.1	46.4	8.0	84	SE	.....	.....	4	.....	9	.....	.....	0.04	1.	.....	Director Lose.
Emden	.....	.....	30.14	765.6	42.8	6.0	98	SSW	.....	.....	3	.....	10	.....	.....	0.079	2.0	.....	Prof. Prestel.
Frankfort on the Main	.....	.....	30.30	769.6	38.8	3.8	77	SSW	.....	.....	1	.....	10	.....	.....	Inap.	Inap.	Foggy	Physical Society.
Friedrichshafen	28.88	733.6	30.40	772.2	32.4	0.2	92	WNW	.....	.....	2	.....	9	.....	.....	0	0	.....	M. Wilhelm.
Hamburg	.....	.....	30.13	765.4	34.5	1.4	96	SE	.....	.....	4	.....	10	.....	.....	0.031	0.8	Raining.....	Captain F. Hegemann.
Kiel	.....	.....	30.09	764.3	34.2	1.2	90	S	.....	.....	2	.....	10	.....	.....	0.024	0.6	.....	Prof. G. Karsten.
Königsberg, (Prussia)	.....	.....	30.49	774.5	19.6	— 6.9	90	SE	.....	.....	2	.....	9	.....	.....	0	0	.....	Prof. E. Luther.
Köslin	.....	.....	30.38	771.7	32.0	0.0	.....	SSE	.....	.....	2	.....	5	.....	.....	0	0	.....	H. Müller.
Leipsic	.....	.....	30.27	768.8	37.9	3.3	75	S	.....	.....	2	.....	10	W	.....	0	0	.....	Prof. Bruhns.
Meinel	.....	.....	30.50	774.6	13.6	—10.2	90	SE	.....	.....	2	.....	0	.....	.....	0.008	0.2	Smoke-haze.	Reinbrecht & Skalweit.
Münster	.....	.....	30.07	763.6	48.2	9.0	85	SW	.....	.....	1	.....	10	.....	.....	0	0	.....	Prof. E. Heis.
Neufahrwasser	.....	.....	30.44	773.1	23.0	— 5.0	95	S	.....	.....	2	.....	10	.....	.....	0.008	0.2	.....	A Lothe.
Posen	.....	.....	30.39	771.8	30.9	— 0.6	92	SE	.....	.....	3	.....	10	.....	.....	0	0	.....	Dr. Magener.
Strassburg, (in Alsace)	.....	.....	30.34	770.7	40.1	4.5	74	Calm	.....	.....	0	.....	10	.....	.....	0	0	.....	Dr. Schur.
Stuttgart	.....	.....	30.28	769.2	38.7	3.7	72	E	.....	.....	1	.....	10	.....	.....	0	0	.....	Prof. Schoder.
Thorn	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Dr. Hasenbalg.
Treves, (Trier)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Prof. Flesch.
Weissenburg, (Bavaria)	28.74	730.1	30.18	766.6	42 8	6.0	69	W	.....	.....	1	.....	10	.....	.....	0.004	0.1	Foggy	Dr. von Bebber.
Wustrow, Naval School	.....	.....	30.35	771.0	37.6	3.1	65	SE	.....	.....	1	.....	9	SE	.....	0	0	.....	E. F. Schütz.
GERMAN NAVAL SERIES.																			
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—The elevation of Friedrichshafen is 413.4 meters, or 1,356.3 feet; Weissenburg, 431 meters, or 1,414.0 ft. In the originals the distinction between the amount of upper and lower clouds is not made. It is not always certain that the remarks in the weather column refer to the moment of observation.

GREEK SERIES.

Furnished by the coöperation of Professor Dr. J. F. Julius Schmidt, Director of the Royal Observatory at Athens.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Athens			30.17	766.3	56.9	10.5		NE										Very cloudy	

Note.—The originals give the barometer corrected, but not reduced to sea-level; occasionally the kind of clouds; the weather as published. They omit the humidity wind-force, amount of cloudiness and rain-fall.

ITALIAN SERIES.

Furnished by the coöperation of His Excellency the Minister of Agriculture, Industry and Commerce, and the respective Observers.

Udine			30.29	769.3	42.3	5.7	54	Calm	0	0			0			0	0		Prof. Giovanni Clodig
Stelvio	22.23	564.6			22.5	— 5.3		SE			1		0			0	0		Signora Ernesta Manfredi.
Valdobbia	22 26	565.5			25.0	— 3.9	46	WNW			2		4	NE		0	0		Ab. Dom. Mongini.
Padua			30.29	769.4	40.5	4.7	73	ESE	1.3	0.6			0			0	0		Prof. Dott. Lor nzoni.
Vicenza			30.30	769.5	41.0	5.0	69	E	1.3	0.6			0			0	0		Conte Alm. Da Schio.
Verona			30.27	768.8	42.4	5.8	83	E			1		0			0	0		Dott. B. Bertoncelli.
Bergamo	28.92	734.5	30.28	769.0	41.0	5.0	69	SW			2		1			0	0		Prof Trionfini Carlo.
Domodossola			30.30	769.5	41.0	5.0	53	SW			4		2			0	0		Prof. Giuseppe O..lza.
Milan			30.32	770.0	41.4	5.2	84	WNW			1		0			0	0		Ab. Gio. Capelli.
Pavia			30.32	770.1	39.2	4.0	77	WSW			1		0			0	0		Prof. Gio. Cantoni.
Moncalieri			30.32	770.2	39.2	4.0	74	ENE	2.5	1.1			0			0	0		Prof. P. F. Denza.
Mondovi	28.33	719.6	30.31	769.9	39.4	4.1	45	Calm			0		1	NNE		0	0		Prof. D. C. Bruno.
Porto Maurizio			30.35	771.0	52.3	11.3	56	SW			2		1			0	0		Prof. L. Vassallo.
Genoa			30.30	769.6	52.9	11.6	40	SW	1.8	0.8			0			0	0		Prof. G. M. Garibaldi.
Piacenza			30.34	770.5	33.0	3.9	80	NW	6.9	3.1			0			0	0		Dott. G. Manzi.
Parma			30.34	770.5	42.8	6.0	64	NW			2		0			0	0		Prof. P. Pigorini.
Florence			30.34	770.6	42.8	6.0	64	NW			2		0			0	0		Cav. F. Meucci.
Leghorn			30.30	769.7	47.1	8.4	66	ENE	4.3	1.9			0			0	0		Prof. P. Monte.
Siena	29.06	738.0	30.30	769.5	44.4	6.9	54	ENE	0	0			0			0	0		Prof. L. Toscani.
Urbino	28.72	729.4	30.32	770.2	40.1	4.5	71	S			2		0			0	0		Prof. P. Serpieri.
Pesaro			30.35	771.0	43.3	6.3	75	NW	13.0	5.8			0			0	0		Prof. Luigi Guidi.
Ancona			30.33	770.3	45.5	7.5	67	WNW			2		1			0	0		Prof. F. De— Bosis.
Grosseto			30.31	769.8	51.6	10.9	55	NNW			2		2	SE		0	0		Avv. P. Ponticelli.
Rome			30.29	769.3	50.7	10.4	54	NNE	3.8	1.7			0			0	0		Prof's. P. Secchi & L. Respighi.
Naples, O. U			30.26	768.7	54.9	12.7	45	N			2		1	NE		0	0		Prof. L. Palmieri.
Lecce			30.23	767.7	52.2	11.2	60	N	13.7	6.1			3	N		0	0		Prof. C. De—Giorgi.
Cosenza			30.24	768.2	42.8	6.0	74	ENE	15.4	6.9			2			0	0		Prof. F. D. Conti.
Cagliari																			Prof. A. Pacinotti.
Ilioposto, (Sicily)			30.17	766.4	53.6	12.0	75	SE			2		5	SW		0	0		Prof. F. Cafiero.
Palermo			30.19	766.9	54.0	12.2	67	WNW	4.4	2.2			9			0.031	0.8	Light rain	Prof. G. Cacciatore.
Caltanissetta	28.23	717.0	30.22	767.6	47.8	8.8	58	NW			4		7	SE		0	0		Prof. A. Pagani.
Siracusa			30.18	766.5	55.6	13.1	59	NNE			2		6	NNE		0.004	0.1	Light rain	Prof. V. Giuliano.
Sub-Series.																			
Naples, S. R.			30.30	769.5	51.6	10.9	48	ENE	1.2	0.6			2	E		0	0		Prof. F. Brioschi

Note.—The originals give the wind-force by the scale 0 to 4, or the velocity in kilometers per hour; generally, no distinction between upper and lower clouds; occasionally the weather by the Vienna symbols. The elevation of Stelvio is 2,543.0 meters, or 8,342.9 feet; Valdobbia, 2,548.0 meters or 8,359.3 feet; Bergamo, 379.6 meters, or 1,245.3 feet; Mondovi, 556 meters, or 1,824.2 feet; Siena, 348.5 meters, or 1,143.3 feet; Urbino, 451 meters, or 1,479.7 feet; Caltanissetta, 570.3 meters, or 1,871.0 feet.

JAPANESE SERIES.

Furnished by the coöperation of the Imperial University of Tokei, Japan.

Tokei			30.25	768.3	44	6.7		Calm	0	0			10		S	0	0		Prof. P. V. Vecder.

Note.—The originals give the amount of cloudiness by the scale 0 to 4 without distinguishing between upper and lower clouds. The rain-fall is measured at 7 a. m., local time

MEXICAN SERIES.

By authority of the Secretary of Public Works.

Furnished by the coöperation of Senor Mariano Barcena, Director of the Central Meteorological Observatory in the City of Mexico.

Mexico																			Mariano Barcena. Vicente Reyes. Miguel Perez. (Engineers in charge.)

Note.—The elevation of Mexico is 2,290 meters, or 7,512.9 feet. The rain-fall is measured at 6 a. m., local time.

NETHERLANDS' SERIES.

Furnished by the cooperation of Professor Buys Ballot, Director of the Royal Meteorological Institute of the Netherlands at Utrecht.

Flushing			30.01	762.3	50.5	10.3		SSW			5					0.020	0.5		
Groningen			29.94	760.5	45.3	7.4		S			5					0.091	2.3		
Hejder			29.91	759.8	48.9	9.4		S			5					0	0		
Utrecht			29.97	761.2	50.0	10.0	82	SSW			4		8			0.079	2.0	Very cloudy	

Note.—The originals give the wind-pressure in kilograms per square meter; for Utrecht, they give the weather as published, from which the amount of cloudiness is taken by the scale 0 to 4, without distinguishing between upper and lower clouds. It is assumed that the barometer readings have been reduced to sea-level.

NORWEGIAN SERIES.

Furnished by the coöperation of Professor H. Mohn, Director of the Royal Norwegian Meteorological Institute at Christiania.

Bergen			29.65	753.0	42.1	5.6	85	S	18.3	8.2			10			0.591	15.0	Raining	
Brono			29.78	756.4	38.8	3.8	54	SSE	24.6	11			10						
Christiania			30.10	764.5	32.2	0.1	87	SE	6.0	2.7			10			0.228	5.8		
Tromsö			29.72	754.9	33.8	1.0	81	W	4.5	2			4			0.138	3.5		

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols. The cloudiness and weather at Bergen refer to 2h., p. m., local time, instead of 1h., 4 m...

PORTUGUESE SERIES.

Furnished by the coöperation of J. C. de Brito Capello, Director of the Meteorological Observatory of the Infante Don Luiz at Lisbon.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Angra, (Azores)	.....	.....	30.08	764.0	61.4	10.8	75	NNW	1.8	0.8	.....	.....	4	.....	.....	0	0	....	Dr. J. A. Sampaio.
Campo Major	.....	.....	30.30	769.6	43 3	6.3	97	ESE	4.2	1.89	.....	.....	10	.....	.....	0	0	Foggy	Dr. A. M. R. dos Santos.
Funchal, (Madeira)	.....	.....	30.16	766.1	62.4	16.9	63	Calm	0	0	.....	.....	10	.....	.....	0	0	.....	Capt. D. A. de Cunha.
Lisbon	.....	.....	30.25	768.4	54.9	12.7	85	SSE	7.4	3.3	.....	.....	10	.....	.....	0.252	6.4	.....	The Observatory.
Ponta Delgada, (Azores)	.....	.....	30.13	765.4	56.5	13.6	53	N	3.1	1 4	.....	.....	6	.....	.....	0.067	1.7	.....	
.....																			

Note.—The originals give the wind-velocity in kilometers per hour; occasionally, the weather by the Vienna symbols; the amount of cloudiness without distinguishing between upper and lower clouds; the barometer corrected but not reduced to sea-level. The rain-fall at Lisbon is measured at noon, instead of 0 h. 6 m., p. m.

RUSSIAN SERIES.

Furnished by the coöperation of Professor H. Wild, Director of the Imperial Central Physical Observatory of Russia, at St. Petersburg.

Warsaw	.....	.....	30.46	773.6	22.3	— 5.4	80	E	7	3	.....	.....	6	.....	.....	.....	.....	.....	Astronomical Obs.
Wilna	.....	.....	30.52	775.1	13.6	—10.2	81	Calm	0	0	.....	.....	6	.....	.....	.....	.....	.....	Astronomical Obs.
Dorpat	.....	.....	30.59	777.0	4.3	—15.4	88	NE	2	1	.....	.....	4	.....	.....	.....	.....	.....	Physical Cabinet.
St. Petersburg	.....	.....	30.62	777.7	0.0	—17.8	92	ESE	4	2	.....	.....	10	.....	.....	.....	.....	Light fog.....	Central Physical Obs.
Kuopio	.....	.....	30.59	777.0	— 9.4	—23.0	.....	Calm	0	0	.....	.....	10	.....	.....	.....	.....	.....	Ch. Forsten.
Kieff	.....	.....	30.40	773.6	10.0	—12.2	100	NNE	7	3	.....	.....	8	.....	.....	.....	.....	Solar corona	Physical Cabinet.
Nikolaiev	.....	.....	30.37	771.4	21.7	— 5.7	90	NE	9	4	.....	.....	9	.....	.....	.....	.....	.....	Kurdakof
Kertch	.....	.....	30.20	767.0	38.5	3.6	93	NNE	7	3	.....	.....	10	.....	.....	.....	.....	.....	Lagorio.
Moscow	.....	.....	30.65	778.5	16 5	— 8.6	91	S	9	4	.....	.....	10	.....	.....	.....	.....	.....	Meteorological Obs.
Lugan	.....	.....	30.35	770.9	27.7	— 2.4	83	E	22	10	.....	.....	10	.....	.....	.....	.....	.....	Meteorological Obs.
Archangel	.....	.....	30.63	777.9	2.8	—16.2	90	SSW	7	3	.....	.....	6	.....	.....	.....	.....	.....	Ogorodnikof.
Tiflis	28.87	733.3	30.34	770.6	43.7	6.5	67	SE	9	4	.....	.....	9	.....	.....	.....	.....	.....	Physical Observatory.
Astrakhan	.....	.....	30.54	775.6	25.7	— 3.5	74	ENE	9	4	.....	.....	7	.....	.....	.....	.....	.....	Sebastianof.
Kasan	.....	.....	30.80	782.3	— 0.9	—28.3	87	Calm	0	0	.....	.....	1	.....	.....	.....	.....	.....	Physical Cabinet.
Orenburg	.....	.....	30.63	778.0	—15.3	—26.3	.....	E	18	8	.....	.....	0	.....	.....	.....	.....	.....	Tschernischei.
Ekaterinburg	29.49	749.0	30.54	775.6	8.4	—13.1	86	WSW	9	4	.....	.....	10	.....	.....	.....	.....	.....	Meteorological Obs.
Nukuss	.....	.....	30.54	775.7	21.9	— 5.6	90	NE	4	2	.....	.....	0	.....	.....	.....	.....	.....	
Kusaly	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Bobrof.
Tashkend	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Michelson.
Barnaul	.....	.....	30.40	772.2	0.0	—17.8	85	SW	16	7	.....	.....	10	.....	.....	.....	.....	.....	Meteorological Obs.
Yeniseisk	.....	.....	29.87	758.6	—11.0	—23.9	83	SSE	4	2	.....	.....	7	.....	.....	.....	.....	Snowing.....	Marks.
Irkutsk	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Usolzef.
Peking, (China)	.....	.....	30.29	769.4	34.9	1.6	48	NW	7	3	.....	.....	0	.....	.....	.....	.....	.....	Physical Observatory.
Nertchinsk	27.85	707.3	30.20	767.1	—13.9	—25.5	93	Calm	0	0	.....	.....	0	.....	.....	.....	.....	.....	Meteorological Obs.
Vladivostock	.....	.....	30.00	762.1	28.2	— 2.1	100	Calm	0	0	.....	.....	7	.....	.....	Blank	Blank	.....	
Nikolaievsk, on the Amoor	.....	.....	.....	.....	—15.2	—26.2	.....	Calm	0	0	.....	.....	0	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols; they omit the rain-fall. The elevation of Tiflis is 409 meters, or 1,341.8 feet; Ekaterinburg, 306. 4? m., or 1,005.2? ft.; Tashkend, 494.2? m., or 1,621.3? ft.; Irkutsk, 392 m., or 1,286 ft.; Nertchinsk, 592.0? m., or 1,942.2? ft.

SPANISH SERIES.

Furnished by the coöperation of Antonio Aguilar, Director of the Royal Observatory at Madrid, and of Don Cecilio Pujazon, Captain R. N. Director of the Naval Observatory at San Fernando.

Madrid	.....	.....	30.37	771.5	44.1	6.7	86	NE	2.2	1.00	.....	.....	10	.....	.....	0.008	0.2	Cloudy.....	Royal Observatory.
San Fernando	.....	.....	30.28	769.0	62.4	16.9	64	ESE	7.2	3.2	.....	0	1	.....	SE	.....	.....	.....	Naval Observatory.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

Note.—The originals give the weather in general terms, as published; rain-fall for San Fernando from preceding to following midnight; wind-velocity for Madrid in kilometers per hour.

SWEDISH SERIES.

Furnished by the coöperation of Professor R. Rubenson, Director of the Royal Swedish Meteorological Institute, at Stockholm, and of Dr. H. H. Hildebrandsson, Chief of the Meteorological Division of the Upsala Observatory.

Haparanda	.....	.....	30.35	770.8	12.2	—11.0	93	S	.....	.....	4	.....	10	.....	.....	0	0	.....	
Umea	.....	.....	30.33	770.3	16.9	— 8.4	100	SE	.....	.....	7	.....	10	.....	.....	0	0	.....	
Hernosand	.....	.....	30.25	768.4	29.8	— 1.2	98	S	.....	.....	6	.....	10	.....	.....	0.063	1.6	.....	
Stockholm	.....	.....	30.35	770.9	29.1	— 1.6	96	S	.....	.....	4	.....	10	.....	.....	0	0	.....	
Wisby	.....	.....	30.42	772.7	27.7	— 2.4	87	SSW	.....	.....	4	.....	7	.....	.....	0	0	.....	
Sub-Series.																			
Upsala	.....	.....	30.34	770.6	29.1	— 1.6	92	S	18.1	8.1	.....	.....	10	.....	.....	0.011	0.27	.....	Dr. Hildebrandsson.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

Note.—The originals give the wind-force by the scale 0 to 6, and Upsala also velocity in meters per second; occasionally, the weather by the Vienna symbols, or in general terms; no distinction between the amount of upper and lower clouds. The rain-fall is measured at 8 a. m., local time.

SWISS SERIES.

Furnished by the coöperation of Professor R. Wolf, Director of the Observatory at Zurich, and of Professor E. Plantamour, Director of the Observatory at Geneva.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Geneva	28.88	733.6	30.36	771.2	37.0	2.8	68	SSE	.....	.....	0	.....	1	.....	.....	0	0	Clear	The Observatory.
Zurich	28.66	727.9	30.36	771.2	34.5	1.4	71	E	.....	.....	1	.....	3	.....	.....	0	0	Bright	The Observatory.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Note.—For Geneva the corresponding departures from the normal values are: Barometer, +0.0 mm; Thermometer, +1.3 cent.; Relative Humidity, —10 per cent.

Note.—The rain-fall is measured at Zurich at 7 a. m. on the following day. The originals give the barometer corrected but not reduced to sea-level; the wind-force by the scale 0 to 4 for Zurich; the amount of cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The elevation of Geneva is 408 meters, or 1,339 feet, and that of Zurich 470 meters, or 1,542 feet.

TURKISH SERIES.

Furnished by the coöperation of A. Coumbary, Effendi, Director of the Central Observatory at Constantinople, and of Professor C. V. A. Van Dyck, Superintendent of the Lee Observatory at Beirut.

Constantinople	.....	.....	30.23	767.8	40.5	4.7	88	N	20	9.0	.....	.....	10	.....	NE	0	0	.....	
Fao, (Persian Gulf)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Salonica	.....	.....	30.27	768.8	64.2	17.9	.....	NW	.....	.....	1	.....	5	.....	.....	.....	.....	.....	
Valona	.....	.....	30.13	765.2	52.5	11.4	.....	W	.....	.....	1	.....	0	.....	.....	.....	.....	.....	
Varna	.....	.....	30.18	766.5	32.0	0.0	.....	N	.....	.....	2	.....	10	.....	.....	Blank	Blank	.....	
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y	.....	.....	30.10	764.5	64.9	18.3	61	SW	.....	.....	1	.....	2k	.....	SW	0.40	10.2	*D. clouds	Prof. C. V. A. Van Dyck.

Note.—The originals give the wind-force by the scale 0 to 7, (except Beirut, by the scale 0 to 12, and Constantinople velocity in meters per second;) the weather in general terms as published; no distinction between upper and lower clouds, and, except Constantinople and Beirut, the amount by the scale 0 to 4. It is assumed that the barometer is reduced to sea-level. * Detached clouds.

CANADIAN SERIES.

Furnished by the coöperation of Professor G. T. Kingston, Director of the Magnetic Observatory at Toronto, and Superintendent of the Meteorological Office of the Dominion of Canada, and the respective Observers. Those marked with a star (*) are also telegraphed daily to the office of the Chief Signal Officer, U. S. Army.

Bathurst, N. B	.....	.....	29.98	761.5	— 1.5	—18.6	84	SW	2	0.9	.....	.....	0	.....	.....	.....	.....	.....	Hon. J. Ferguson.
Brockville, Ontario	.....	.....	30.21	767.3	23	— 5.0	.....	SW	1	0.4	.....	.....	10s	.....	SW	Inap.	Inap.	Cloudy	W. R. Bigg.
*Chatham, N. B	.....	.....	30.00	762.0	3	—16.1	97	SW	3	1.3	.....	0	Haze	.....	.....	0	0	Clear	G. A. Blair.
Charlottetown, P. E. Island	.....	.....	30.03	762.7	16	— 8.9	97	SW	8	3.6	.....	8cs	0	.....	.....	0	0	Cloudy	H. J. Cundall, C. E.
Cornwall, Ontario	.....	.....	30.19	766.8	18.2	— 7.7	87	W	.....	.....	1	.....	10s	.....	.....	0.05	1.3	Dull	James Smith, M. A.
Dalhousie, N. B	.....	.....	29.98	761.5	.....	.....	.....	W	.....	.....	1	.....	.....	.....	.....	0.05	1.3	Clear	H. A. Johnson.
Esquimault, B. C	.....	.....	30.23	767.8	31.0	— 0.6	79	N	.....	.....	.....	0	0	.....	.....	0	0	Clear	W. H. Bevis.
Fredericton, N. B	.....	.....	30.13	765.3	1.1	—17.2	100	Calm	0	0	.....	Haze	Haze	.....	.....	0	0	Fair	Prof. Harrison.
*Fort Garry, Manitoba	.....	.....	29.84	757.9	—10	—23.3	91	SW	18	8.0	.....	0	0	.....	.....	0	0	Clear	James Stewart.
Goderich, Ontario	.....	.....	30.22	767.6	25.9	— 3.4	91	Calm	.....	.....	0	.....	10n	.....	.....	Inap.	Inap.	Threatening	H. J. Strang, M. A.
Granton, Ontario	29.05	737.9	30.20	767.1	32.1	0.1	.....	S	.....	.....	1	0?	0?	.....	.....	0	0	Cloudy ?	James Grant.
*Halifax, N. S	.....	.....	30.08	764.0	20	— 6.7	91	W	7	3.1	.....	.....	8ks	.....	W	0	0	Cloudy	F. Allison, M. A.
Hamilton, Ontario	.....	.....	30.26	768.6	26.9	— 2.8	92	SW	.....	.....	1	10cs	0	.....	.....	0	0	Cloudy	G. Dickson.
Heart's Content, N. F	.....	.....	29.84	757.9	20	— 6.7	70	NW	.....	.....	4	3k	0	.....	.....	0	0	Cloudy	E. Weedon.
*Kingston, Ontario	.....	.....	30.23	767.8	25	— 3.9	98	Calm	0	0	.....	.....	10s	.....	.....	Inap.	Inap.	Cloudy	S. Woods, M. A.
*Montreal, Quebec	.....	.....	30.17	766.3	17	— 8.3	97	W	10	4.5	.....	0	2ks	.....	.....	0	0	Clear	C. H. McLeod, C. E.
*Ottawa, Ontario	.....	.....	30.20	767.1	11	—11.7	84	W	2	0.9	.....	.....	10n	.....	W	0	0	Threatening	J. B. Haney.
*Parry Sound, Ontario	.....	.....	30.22	767.6	11	—11.7	70	Calm	0	0	.....	2k	6ks	.....	.....	0	0	Fair	Rev. R. Mosley.
Port Dover, Ontario	.....	.....	30.25	768.3	26	— 3.3	88	Calm	0	0	.....	.....	Haze	.....	.....	Inap.	Inap.	Hazy	H. Morgan.
Port Hastings, N. S	.....	.....	30.04	763.0	16.0	— 8.9	.....	NW	2	0.9	.....	.....	.....	.....	.....	0	0	Fine	Peter Grant.
Port Stanley, Ontario	.....	.....	30.25	768.3	26	— 3.3	97	W	1	0.4	.....	.....	10n	.....	W	0.05	1.3	Cloudy	M. Payne.
*Quebec, Quebec	.....	.....	30.12	765.0	16	— 8.9	83	SW	6	2.7	.....	0	0	.....	.....	0	0	Clear	Capt. Ashe, R. N.
*Rockliffe, Ontario	.....	.....	30.25	768.3	—14	—25.6	84	NW	3	1.3	.....	2c	2s	NW	NW	0	0	Fair	
St. John, N. B	.....	.....	30.14	765.5	14	—10.0	91	W	1	0.4	.....	0	0	.....	.....	0	0	Clear	G. Murdoch, C. E.
*Saugeen, Ontario	.....	.....	30.18	766.6	25	— 3.9	87	W	1	0.4	.....	.....	10n	.....	.....	0.01	0.3	Cloudy	K. Stewart.
Stayner, Ontario	.....	.....	30.19	766.8	22	— 5.6	94	Calm	0	0	.....	.....	10n	.....	.....	Inap.	Inap	Cloudy	R. J. Cole.
Stratford, Ontario	28.88	733.5	30.25	768.3	22.4	— 5.3	95	SW	.....	.....	.....	.....	10s	.....	.....	0.05	1.3	Raining	C. J. MacGregor, M. A.
*Sydney, C. B	.....	.....	30.01	762.2	12	—11.1	94	SW	6	2.7	.....	5k	0	NW	.....	0	0	Fair	T. C. Hill.
*Toronto, Ontario	.....	.....	30.23	767.8	24	— 4.4	95	Calm	0	0	.....	.....	10n	.....	.....	0.01	0.3	Cloudy	Magnetic Observatory.
Woodstock, Ontario	.....	.....	30.21	767.3	24.6	— 4.1	96	W	6	2.7	.....	10k	0	.....	.....	0.10	2.5	Cloudy	J. Montgomery.
Sub-Series.																			
St. Johns, Newfoundland	.....	.....	29.99	761.7	12.0	—11.1	.....	W	.....	.....	.....	5k	5s	.....	.....	0	0	Fair	John Delany.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
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Note.—The originals for Brockville, Charlottetown, Port Dover, Port Stanley, Stayner, St. Johns, N. F. and those telegraphed, give the amount of cloudiness by the scale 0 to 4. The elevation of Granton is 1,015 feet, or 309.4 m.; Stratford, 1,182 feet, or 360.3 m.

UNITED STATES SERIES.

Furnished by the coöperation of Bvt. Brig. Gen. Albert J. Myer, Chief Signal Officer, U. S. Army.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather	Observer.
Albany, N. Y.	.....	.....	30.25	768.3	24	— 4.4	85	Calm	0	0	.....	Haze	Fog	.....	.....	0	0	Fair	
Alpena, Mich.	.....	.....	30.19	766.8	8	—13.3	78	NW	3	1.3	.....	0	2s	.....	.....	Inap.	Inap.	Fair	
Atlantic City, N. J.	.....	.....	30.29	769.4	35	1.7	100	W	4	1.8	.....	.....	10s	.....	W	0	0	Cloudy	
Augusta, Ga.	.....	.....	30.31	769.9	53	11.7	96	Calm	0	0	.....	.....	10s	.....	.....	0.18	4.6	Cloudy	
Baltimore, Md.	.....	.....	30.29	769.4	37	2.8	90	Calm	0	0	.....	.....	10s	.....	.....	0.04	1.0	Foggy	
Barnegat, N. J.	.....	.....	30.26	768.6	34	1.1	100	W	10	4.5	.....	.....	Fog	.....	.....	0	0	Foggy	
Bismarck, Dakota	27.83	706.9	29.63	752.6	— 7	—21.7	79	W	8	3.6	.....	0	0	.....	.....	0.14	3.6	Clear	
Boston, Mass.	.....	.....	30.17	766.3	31.5	— 0.3	84	W	3	1.3	.....	1cs	Haze	W	.....	0	0	Hazy	
Breckenridge, Minn.	.....	.....	30.09	764.3	—15	—26.1	72	SE	8	3.6	.....	0	0	.....	.....	0	0	Clear	
Buffalo, N. Y.	.....	.....	30.21	767.3	28	— 2.2	78	SW	1	0.4	.....	.....	10s	.....	.....	Inap.	Inap.	Cloudy	
Burlington, Vt.	.....	.....	30.22	767.6	23	— 5.0	73	Calm	0	0	.....	0	8s	.....	.....	0.01	0.3	Cloudy	
Cairo, Ill.	.....	.....	30.33	770.4	34	1.1	100	SE	1	0.4	.....	.....	10s	.....	.....	0.02	0.5	Cloudy	
Cape Hatteras, N. C.	.....	.....	30.24	768.1	44	6.7	92	N	8	3.6	.....	.....	10s	.....	N	0.14	3.6	Cloudy	
Cape Henry, Va.	.....	.....	30.31	769.9	38	3.3	90	N	4	1.8	.....	.....	10s, fg	.....	.....	0.26	6.6	Cloudy	
Cape Lookout, N. C.	.....	.....	30.34	770.6	46	7.8	100	N	4	1.8	.....	.....	10n	.....	.....	Inap.	Inap.	Light rain	
Cape May, N. J.	.....	.....	30.29	769.4	34	1.1	100	W	10	4.5	.....	.....	Fog	.....	.....	0	0	Foggy	
Charleston, S. C.	.....	.....	30.32	770.1	55	12.8	93	E	1	0.4	.....	.....	Fog	.....	.....	0.01	0.3	Foggy	
Cheyenne, Wyoming	23.82	605.0	29.76	755.9	35	1.7	52	W	28	12.5	.....	0	0	.....	.....	0	0	Clear	
Chicago, Ill.	.....	.....	30.19	766.8	30	— 1.1	78	SW	4	1.8	.....	.....	10s	.....	.....	0.01	0.3	Cloudy	
Cincinnati, Ohio	.....	.....	30.26	768.6	38	3.3	90	S	4	1.8	.....	.....	10n	.....	.....	Inap.	Inap.	Light rain	
Cleveland, Ohio	.....	.....	30.27	768.8	33	0.6	89	SW	5	2.2	.....	.....	10s	.....	SW	0.03	0.8	Cloudy	
Corsicana, Tex.	.....	.....	30.28	769.1	44	6.7	92	N	2	0.9	.....	.....	10n	.....	.....	0.22	5.6	Light rain	
Davenport, Iowa	.....	.....	30.30	769.6	5	—15.0	87	Calm	0	0	.....	4cs	8s	SW	.....	Inap.	Inap.	Cloudy	
Denison, Tex.	.....	.....	30.28	769.1	43	6.1	92	SE	2	0.9	.....	.....	Fog	.....	.....	0.03	0.8	Foggy	
Denver, Col.	24.07	626.6	29.89	759.2	29	— 1.7	77	SW	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Detroit, Mich.	.....	.....	30.20	767.1	31	— 0.6	79	W	1	0.4	.....	.....	10s	.....	.....	0	0	Cloudy	
Dodge City, Kan.	27.39	695.7	29.84	757.9	17	— 8.3	83	SE	10	4.5	.....	.....	10s	.....	.....	0.01	0.3	Cloudy	
Dubuque, Iowa	.....	.....	30.24	768.1	12	—11.1	80	Calm	0	0	.....	.....	10n	.....	.....	Inap.	Inap.	Light snow	
Duluth, Minn.	.....	.....	30.04	763.0	7	—13.9	86	W	4	1.8	.....	.....	10s	.....	.....	0	0	Cloudy	
Eastport, Me.	.....	.....	30.13	765.3	18	— 7.8	84	W	10	4.5	.....	2ck	8s	W	W	0	0	Fair	
Erie, Pa.	.....	.....	30.22	767.6	33	0.6	89	SW	4	1.8	.....	.....	Fog	.....	.....	Inap.	Inap.	Foggy	
Escanaba, Mich.	.....	.....	30.10	764.5	8	—13.3	78	S	5	2.2	.....	0	1s	.....	.....	0	0	Clear	
Fort Gibson, Indian Ter.	.....	.....	30.26	768.6	32	0.0	100	NW	8	3.6	.....	.....	Fog	.....	.....	0	0	Foggy	
Ft. St. Michael, Alaska	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Fort Sill, Indian Ter.	28.99	736.3	30.17	766.3	29	— 1.7	59	N	6	2.7	.....	.....	Fog	.....	.....	0	0	Foggy	
Fort Sully, Dakota	28.15	715.0	30.04	763.0	—13	—25.0	74	Calm	0	0	.....	0	0	.....	.....	0.20	5.3	Clear	
Florence, Arizona	28.64	727.4	30.21	767.3	44	6.7	.....	W	.....	.....	.....	0	0	.....	.....	0	0	Clear	
Galveston, Tex.	.....	.....	30.31	769.9	53	11.7	100	E	6	2.7	.....	.....	Fog	.....	.....	0.09	2.3	Foggy	
Grand Haven, Mich.	.....	.....	30.16	766.1	32	0.0	89	W	10	4.5	.....	.....	10s	.....	.....	0.01	0.3	Cloudy	
Indianapolis, Ind.	.....	.....	30.27	768.8	38	3.3	90	S	3	1.3	.....	.....	Fog	.....	.....	Inap.	Inap.	Foggy	
Indianola, Tex.	.....	.....	30.27	768.8	50	10.0	100	NE	4	1.8	.....	.....	Fog	.....	.....	0.15	3.8	Foggy	
Jacksonville, Fla.	.....	.....	30.32	770.1	62	16.7	94	E	1	0.4	.....	.....	Fog	.....	.....	0	0	Foggy	
Keokuk, Iowa	.....	.....	30.27	768.8	18	— 7.8	84	N	2	0.9	.....	.....	10s	.....	N	0	0	Cloudy	
Key West, Fla.	.....	.....	30.28	769.1	70	21.1	84	NE	8	3.6	.....	0	0	.....	.....	0	0	Clear	
Kittyhawk, N. C.	.....	.....	30.32	770.1	38	3.3	100	N	10	4.5	.....	.....	Fog	.....	.....	0.10	4.8	Foggy	
Knoxville, Tenn.	.....	.....	30.32	770.1	48	8.9	92	Calm	0	0	.....	.....	Fog	.....	.....	0.10	2.5	Dense fog	
La Crosse, Wis.	.....	.....	30.19	766.8	14	—10.0	63	SW	3	1.3	.....	.....	10s	.....	SW	0	0	Cloudy	
Leavenworth, Kan.	.....	.....	30.32	770.1	10	—12.2	80	SW	2	0.9	.....	.....	10s	.....	.....	0.01	0.3	Cloudy	
Louisville, Ky.	.....	.....	30.32	770.1	36	2.2	100	S	2	0.9	.....	.....	Fog	.....	.....	0	0	Foggy	
Lynchburg, Va.	.....	.....	30.32	770.1	36	2.2	100	W	2	0.9	.....	.....	Fog	.....	.....	0	0	Foggy	
Malone, N. Y.	.....	.....	30.16	766.1	24	— 4.4	87	Calm	0	0	.....	.....	10s	.....	SW	0	0	Cloudy	
Marquette, Mich.	.....	.....	30.04	763.0	20	— 6.7	70	SE	4	1.8	.....	.....	10s	.....	.....	0	0	Cloudy	
Memphis, Tenn.	.....	.....	30.34	770.6	42	5.6	100	SE	2	0.9	.....	.....	Fog	.....	.....	Inap.	Inap.	Foggy	
Milwaukee, Wis.	.....	.....	30.22	767.6	22	— 5.6	85	SW	5	2.2	.....	.....	10s	.....	.....	Inap.	Inap.	Cloudy	
Mobile Ala.	.....	.....	30.33	770.4	58	14.4	100	S	1	0.4	.....	.....	Fog	.....	.....	0.02	0.5	Dense fog	
Montgomery, Ala.	.....	.....	30.32	770.1	61	16.1	100	W	2	0.9	.....	.....	Fog	.....	.....	0.10	2.5	Foggy	
Morgantown, W. Va.	29.19	741.4	30.29	769.4	36	2.2	90	S	6	2.7	.....	.....	10s	.....	SW	0	0	Threatening	
Mt. Washington, N. H.	23.53	597.6	29.89	759.2	7	—13.9	100	NW	46	20.6	.....	.....	Fog	.....	.....	0	0	Foggy	
Nashville, Tenn.	.....	.....	30.31	769.9	43	6.1	100	Calm	0	0	.....	.....	Fog	.....	.....	0.01	0.3	Foggy	
New Haven, Conn.	.....	.....	30.23	767.8	25	— 3.9	75	NW	5	2.2	.....	Haz.	Fog	.....	.....	0	0	Fair	
New London, Conn.	.....	.....	30.23	767.8	22	— 5.6	86	Calm	0	0	.....	.....	Fog	.....	.....	0	0	Dense fog	
New Orleans, La.	.....	.....	30.30	769.6	63.5	17.5	94	Calm	0	0	.....	9cs	Fog	.....	.....	0.02	0.5	Cloudy	
Newport, R. I.	.....	.....	30.22	767.6	27	— 2.8	77	SW	3	1.3	.....	0	0	.....	.....	0	0	Clear	
New York, N. Y.	.....	.....	30.26	768.6	30	— 1.1	89	W	8	3.6	.....	.....	Fog	.....	.....	0	0	Foggy	
Norfolk, Va.	.....	.....	30.31	769.9	41	5.0	91	NE	1	0.4	.....	.....	Fog	.....	.....	0.34	8.6	Foggy	
North Platte, Neb.	26.99	685.5	29.79	756.7	5	—15.0	100	SW	4	1.8	.....	.....	10s	.....	.....	0	0	Cloudy	
Omaha, Neb.	29.06	738.1	30.10	764.6	— 4	—20.0	64	S	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Oswego, N. Y.	.....	.....	30.23	767.8	32	0.0	89	Calm	0	0	.....	.....	10s	.....	.....	0.05	1.3	Threatening	
Pembina, Dakota	.....	.....	29.86	758.4	— 5	—20.6	82	S	14	6.3	.....	.....	10s	.....	S	0	0	Cloudy	
Philadelphia, Pa.	.....	.....	30.30	769.6	34	1.1	79	N	9	4.0	.....	2cs	5s	NW	W	0	0	Cloudy	
Pike's Peak, Col.	17.55	445.8	29.76	755.9	4	—15.6	61	SW	55	24.6	.....	0	2s	.....	.....	0	0	Fair	
Pittsburgh, Pa.	.....	.....	30.25	768.3	36	2.2	90	SW	5	2.2	.....	.....	10s	.....	SW	0	0	Cloudy	
Port Huron, Mich.	.....	.....	30.22	767.6	26	— 3.3	100	S	4	1.8	.....	.....	Fog	.....	.....	0.06	1.5	Foggy	
Portland, Me.	.....	.....	30.18	766.0	22	— 5.6	86	Calm	0	0	.....	1cs	Haze	W	.....	0	0	Hazy	
Portland, Oregon	.....	.....	30.12	765.0	34	1.1	70	E	12	5.4	.....	0	0	.....	.....	0	0	Clear	
Punta Rassa, Fla.	.....	.....	30.32	770.1	68.0	20.0	92	NE	6	2.7	.....	0	0	.....	.....	0	0	Clear	
Rochester, N. Y.	.....	.....	30.21	767.3	29	— 1.7	89	W	3	1.3	.....	.....	10s	.....	W	Inap.	Inap.	Cloudy	
Salt Lake City, Utah	25.56	649.2	29.89	759.2	38	3.3	54	S	24	10.7	.....	.....	10s	.....	.....	0	0	Cloudy	
Sandy Hook, N. J.	.....	.....	30.21	767.3	33	0.6	89	W	12	5.4	.....	.....	10s	.....	W	0	0	Cloudy	
San Diego, Cal.	.....	.....	30.28	769.1	51	10.6	100	N	3	1.3	.....	.....	Fog	.....	.....	0	0	Foggy	
San Francisco, Cal.	.....	.....	30.08	764.0	56	13.3	87	SW	16	7.2	.....	Haz	5s	.....	SW	0.30	7.6	Fair	
Santa Fé, N. M.	23.33	592.6	29.87	758.7	31	— 0.6	59	E	2	0.9	.....	0	5s	.....	.....	0	0	Fair	
Savannah, Ga.	.....	.....	30.32	770.1	58	14.4	93	S	2	0.9	.....	.....	Fog	.....	.....	0	0	Foggy	
Shreveport, La.	.....	.....	30.34	770.6	45	7.2	100	NE	2	0.9	.....	.....	Fog	.....	.....	0	0	Foggy	
Smithville, N. C.	.....	.....	30.33	770.4	50	10.0	93	Calm	0	0	.....	.....	Fog	.....	.....	0	0	Foggy	
Springfield, Mass.	.....	.....	30.20	767.1	21.5	— 5.8	77	Calm	0	0	.....	0	Haze	.....	.....	0	0	Clear	
St. Louis, Mo.	.....	.....	30.28	769.1	40	4.4	100	SW	4	1.8	.....	.....	Fog	.....	.....	Inap.	Inap.	Foggy	
St. Marks, Fla.	.....	.....	30.34	770.6	57	13.9	93	Calm	0	0	.....	.....	Fog	.....	.....	0	0	Foggy	
St. Paul, Minn.	.....	.....	30.12	765.0	— 5	—20.6	82	SW	7	3.1	.....	0	2s	.....	.....	0	0	Fair	
St. Paul's Island, Alaska	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Thatcher's Island, Mass.	.....	.....	30.19	766.8	30	— 1.1	68	W	8	3.6	.....	0	0	.....	.....	0	0	Clear	
Toledo, Ohio	.....	.....	30.20	767.1	38	3.3	89	S	4	1.8	.....	.....	10n	.....	.....	0.02	0.5	Light rain	
Tucson, Arizona	27.00	701.0	30.14	765.5	29	— 1.7	.....	SE	.....	.....	.....	0	0	.....	.....	0	0	Clear	
Tybee Island, Ga.	.....	.....	30.31	769.9	54	12.2	100	S	1	0.4	.....	.....	Fog	.....	.....	0	0	Foggy	
Vicksburg, Miss.	.....	.....	30.35	770.9	50.5	10.3	100	Calm	0	0	.....	.....	Fog	.....	.....	0.02	0.5	Foggy	
Virginia City, M. T.	24 00	611.9	29.57	751.1	11	—11.7	79	Calm	0	0	.....	1k	0	W	.....	0.03	0.8	Clear	
Washington, D. C.	.....	.....	30.30	769 6	34.5	1.4	95	E	1	0.4	.....	.....	Fog	.....	.....	0.02	0.5	Foggy	
Wilmington, N. C.	.....	.....	30.33	770.4	47	8.3	100	Calm	0	0	.....	.....	Fog	.....	.....	0	0	Foggy	

UNITED STATES SERIES.—Continued.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Wood's Holl, Mass.	.....	.....	30.22	767.6	32	0.0	79	SW	4	1.8	.....	0	2s	.....	W	0	0	Fair	
Yankton, Dakota	28.74	730.0	30.18	766.6	— 1	—18.3	68	SE	3	1.3	.....	0	0	.....	.....	0	0	Clear	
Yuma, Arizona	.....	.....	30.22	767.6	43	6.1	.....	NE	.....	.....	.....	0	2s	.....	N	0	0	Fair	
Sub-Series.																			
Kingston, Jamaica, W. I.	.....	.....	30.26	768.6	75	23.9	76	N	7	3.1	.....	5c	5s	NE	.....	0	0	.....	James Gall.
Navassa, W. I.	.....	.....	.....	.....	79	26.1	.....	NE	.....	.....	2	.....	.....	.....	.....	0	0	Clear	F. M. Everett.
Clifton, Ja., W. I.	27.28	692.9	30.09	764.3	66	18.9	83	NE	1.0	0.4	.....	2c	5k	NE	.....	0	0	Fine	C. Partridge.
Paramaribo, D. Guiana, S.A	.....	.....	30.01	762.2	82	27.8	83	E	.....	.....	3	3c	5k	E	.....	0	0	.....	C. J. Hering.
Batavia, Dutch Guiana, S.A.	30.03	762.8	.....	.....	78 8	26	.....	E	.....	.....	.....	.....	.....	.....	.....	0	0	Cloudy	Dr. H. Groot.
Medellin, Colombia, S. A.	25.23	640.8	.....	.....	64.2	17.9	85	Calm	.....	.....	0	6k	2ks	.....	.....	0.11	2.8	Cloudy	Thomas Herran.
York Factory, B. A.	.....	.....	29.75	755.6	—32.0	—35.6	.....	W	10	4.5	.....	2c	0	SW.	.....	0	0	Fair	J. Fortescue, W. Wood.
Honolulu, Oahu, H. I.	.....	.....	29.98	761.5	67	19.4	94	W	.....	.....	3	.....	.....	.....	.....	0	0	Clear	Daniel Smith.
Makawao, Maui, H. I.	.....	.....	29.98	761.5	58	14.4	87	Calm	.....	.....	0	0	0	.....	.....	0	0	.....	F. L. Clarke.

Note.—The originals give the amount of cloudiness by the scale 0 to 4, except York Factory, Makawao, Medellin and Paramaribo. The elevation of the barometer at Bismarck is 1,677 feet, or 511.1 meters; Cheyenne, 6,057.3 ft., or 1,846.2 m.; Clifton, about 2,892 ft., or 881.5 m.; Denver, 5,135 ft., or 1,565.2 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Florence, 1,550 (?) ft., or 472.5 (?) m.; Makawao, 2,206 ft., or 672.1 m.; Morgantown, 1,027.9 ft., or 313.3 m.; Medellin, 4,876 ft., or 1,486.2 m.; Mt. Washington, 6,285 ft., or 1,915.6 m.; North Platte, 2,846 ft., or 867.4 m.; Omaha, 1,054.6 ft., or 321.4 m.; Pike's Peak, 14,150.7 ft., or 4,313.1 m.; Salt Lake City, 4,362.2 ft., or 1,329.6 m.; Santa Fe, 6,862.2 (?) ft., or 2,091.6 (?) m.; Tucson, 2,513 (?) ft., or 772.1 (?) m.; Virginia City, 5,480 (?) ft., or 1,670.3 (?) m.; Yankton, 1,278 ft., or 389.5 m. The following constants are added in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Denver, 5.22 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fe, 6.84 in.; Tucson, 2.59 in.; Virginia City, 5.48 in. The elevation of Batavia is about 6 feet; the barometric readings need the addition of 0.2 mm. or 0.01 in. for reduction to sea-level.

UNITED STATES NAVAL SERIES.

By authority of the **SECRETARY OF THE NAVY.**

Furnished by the coöperation of the Navy Department, through Commodore Daniel Ammen, U. S. N., Chief of Bureau of Navigation.

STATIONS AND VESSELS.	True course toward—	Hourly rate in knots.	*Barometer as reported.		Temperature of the Air.		Relative Humidity.	Wind.				Clouds.				Rain-fall or melted snow in the past 24 hours.		State of Ocean.	Direction of swell from—	Weather.	Observer.
								Direction.	Velocity		Force.	Amount.		Direction.							
												Up'er	Low'r	Up'er	Low'r						
			Inches.	Millimeters.	Fahrenheit.	Centigrade.	Per cent.	From—	Miles per hour.	Meters per second.	0—10.	0—10.	0—10.	From—	From—	Inches.	Millimeters.				
Naval Academy, Annapolis, Md.			29.92	760.0	36	2.2	88	WNW			1		10			0.65	16.5			Foggy	
Naval Hospital, Annapolis, Md.			30.30	769.6	34	1.1	100	WNW			1		10		NW	0.65	16.5			Rain & snow	
Navy Yard, Mare Island, Cal.			30.15	765.8	54	12.2	100	S			2		8		ENE					Cloudy	
Navy Yard, Norfolk, Va.			30.42†	772.7†	39	3.9		Calm			0		10n							Foggy	
Navy Yard, Pensacola, Fla.			30.40	772.1	61.5	16.4	94	NW			1		Fog			0	0			Dense fog	
Navy Yard, Portsmouth, N.H.			30.14	765.5	22	— 5.6		WNW			2		0							Clear	
Adams, Port Royal, S. C.			30.38	771.6	58	14.4	94	S&E			1		4		N					Foggy	
Ajax, Port Royal, S. C.			30.03	762.7	56	13.3		Calm			0		10		S					Dense fog	
Canonicus, New Orleans, La.			30.04†	763.0†	59	15.0		Calm			0									Foggy	
Catskill, Port Royal, S. C.			30.26†	769.1†	56	13.3		Calm			0							Smooth		Foggy	
Colorado, New York, N. Y.			30.34	770.6	32	0.0		W			1		10			0	0			Foggy	
Dictator, Port Royal, S. C.			30.30	771.9	54	12.2	100	Calm			0		Fog			0	0			Foggy	
Essex, Norfolk, Va.			30.35	770.9	44	6.7	92	Calm			0		10							Foggy	
Hartford, Hampton Roads, Va.			30.41	772.4	40	4.4		Calm			0					0.25	6.3			Dense fog	
Huron, Port Royal, S. C.			30.40	772.1	58	14.4	100	E			0–1									Foggy	
Lehigh, Port Royal, S. C.			30.70†	779.8†	58	14.4	82	SE			2									Dense fog	
Manhattan, Port Royal, S. C.			30.34†	770.6†	55	12.8		Calm			0							Smooth		Dense fog	
Michigan, Erie, Pa.			30.20	767.1	32	0.0	95	SW			1		10							Cloudy	
Monongahela, Baltimore, Md.			30.29	769.4	37	2.8		Calm			0		n							Foggy	
New Hampshire, Port Royal, S. C.			30.51	774.9	57	13.9	94	Calm			0		Fog					Smooth		Foggy	
Ossipee, New Orleans, La.			30.37	771.4	60	15.6		Calm			0		8							Foggy	
Plymouth, Pensacola, Fla.			30.39	771.9	66	18.9	89	N&W			1		Fog			0	0	Smooth		Fo gy	
Santee, Annapolis, Md.			29.88	758.9	36	2.2	100	WNW			1		10							Foggy	
St. Louis, League Island, Pa.			30.12	765.0	35	1.7		NW			2		10		SE	0	0			Overcast	
Tallapoosa, Washington, D. C.			30.20	767.1	35	1.7	90	Calm			0		10							Fog & mist	
Wabash, Boston, Mass.			30.27	768.8	32	0.0		WSW			1		1							Hazy	
Wyoming, Washington, D.C.			30.72†	780.3†	34	1.1		Calm			0		0							Foggy	

* It is not known that the barometer is corrected for temperature, instrumental error, or elevation. † Aneroid Barometer. ‡ Detached clouds.

UNITED STATES MARINE SERIES

REPORTED TO THE OFFICE OF THE CHIEF SIGNAL OFFICER OF THE ARMY.

NAMES OF VESSELS.	True course toward—	Hourly rate in knots.	Barometer reduced to sea-level.		Temperature of the Air.		Relative Humidity.	Wind.				Clouds.				State of Ocean.	Direction of swell from—	Weather.	Observer.
								Direction.	Velocity.		Force.	Amount.		Direction.					
												Up'er	Low'r	Upper.	Lower.				
			Inches.	Millimeters.	Fahrenheit.	Centigrade.	Per cent.	From—	Miles per hour.	Meters per second.	0—10.	0—10.	0—10.	From—	From—				
PACIFIC MAIL S. S. CO. MARINE SERIES.																			
Furnished by the coöperation of ————, President; Williams, Blanchard & Co., Agents.																			
OCCIDENTAL AND ORIENTAL S. S. CO. MARINE SERIES.																			
Furnished by the coöperation of George H. Bradbury, President; T. H. Goodman, Agent.																			
NORTH GERMAN LLOYD OF BREMEN MARINE SERIES.																			
Furnished by the coöperation of A. Schumacher & Co., Agents.																			
Steamer Nürnberg, N. 46°, 36′, W. 35°, 30′	WSW		29.54	750.3	42.1	5.6		Var.			5–6		10k		W	Swell.	NW	Snow & hail	Capt. A. Jaeger.
MARINE SERIES. (Miscellaneous.)																			
Furnished by the coöperation of Captain James Jorgensen.																			
Schooner Addie Fuller, Frying-pan Light-ship	SW by W	0.5	30.26	768.6	55	12.8	92	NNE	2	0.9						Smooth		Misty	Capt. James Jorgensen.

NOTE.—The schooner Addie Fuller gives the amount of cloudiness by the scale 0 to 4.

COLLATED AT THE OFFICE OF THE CHIEF SIGNAL OFFICER OF THE ARMY, WASHINGTON, D. C.

The records which appear in this Bulletin are copied from the regular exchanges of this office, made in each instance in compliance with an especial request and are published for the uses of the coöperating observers. The barometric readings in the first two columns are reduced to freezing and their respective standards; those in the second two also to mean sea-level. The "weather" is generally published as given.

When the distinction between the upper and lower strata of clouds is not reported, the *kinds* or *types*, viz: cirrus, cumulus, stratus, nimbus, scud, fracto, pallio, haze, fog and smoke, as indicated, respectively, by the letters c, k, s, n, d, f, p, hz., fg. and sm'e, are generally published with the amount in the lower-cloud column. The distinction between the upper and lower strata is carefully made in the United States Series and a portion of the Canadian Series, and the types are indicated by the above letters or their combinations in the proper column.

Albert J. Myer

Brig. Gen. (Bvt., Assgd.,) Chief Signal Officer, U. S. A

BULLETIN

OF

INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON JANUARY 20, 1877.

7:35 A. M. WASHINGTON mean time.

6:7 A. M. MEXICO mean time.
7:7 A. M. SAN JOSE mean time.
0:6 P. M. LISBON mean time.
0:28 P. M. MADRID mean time.
0:43 P. M. GREENWICH mean time.
0:53 P. M. PARIS mean time.
1:1 P. M. BRUSSELS mean time.
1:4 P. M. UTRECHT mean time.
1:13 P. M. BERNE mean time.

1:26 P. M. CHRISTIANIA mean time.
1:33 P. M. COPENHAGEN mean time.
1:33 P. M. ROME mean time.
1:37 P. M. BERLIN mean time.
1:49 P. M. VIENNA mean time.
1:55 P. M. STOCKHOLM mean time.
2:18 P. M. ATHENS mean time.
2:39 P. M. CONSTANTINOPLE mean time.
2:44 P. M. ST. PETERSBURG mean time.

10:2 P. M. TOKEI mean time.

ALGERIAN SERIES.

Furnished by the coöperation of General d'Eudeville, Commandant Supérieur du Génie in Algeria.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Nemours			30.38	771.7	62.4	16.9	56	Calm			0		0			0	0	Clear	Charnot.
Algiers			30.42	772.6	61.4	16.8		SW			1		2			0	0	Clear	Peter.
La Calle			30.37	771.4	56.5	13.6	60	NW			2		4			0.079	2.0	Fair	Fleury.
Tunis			30.31	769.9	57.2	14.0		WNW			3		2			0	0	Clear	Jacques.
Sfax																			
Saida			30.37	771.3	56.7	13.7	47	ENE			1		2			0	0	Clear	Millot.
Tebessa			30.32	770.0	41.5	5.3		NW			1		2			0	0	Clear	Bourgeois.
Geriville			30.35	770.9	41.9	5.5	72	NW			4		2			0	0	Clear	Lemaillot.
Laghouat			30.28	769.1	53.6	12.0	36	W			1		1			0	0	Clear	Guyot.
Biskra			30.28	769.1	61.7	16.5	47	NW			1		0			0	0	Clear	Kuntz.

Note.—In the originals the distinction between the amount of upper and lower clouds is apparently not made. The weather is published as given. The rain-fall is measured at 7 a. m., local time.

AUSTRIAN SERIES.

Furnished by the coöperation of Professor Ferdinand Osnaghi, Director of the Imperial and Royal Central Meteorological Institute at Vienna.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Agram			30.41	772.5	32.9	0.5	87	Calm			0		10			0.016	0.4		Prof. Ivan Stozir.
Cracow, I. R. Observatory			30.47	773.8	29.1	— 1.6	98	NE			2		7			0	0		Dr. Wierzbiski.
Eperies			30.40	772.1	33.1	0.6	73	Calm			0		1cs			0.024	0.60		Julius Mikolik.
Gratz	29.09	738.8	30.41	772.3	34.7	1.5	93	S			2		9			0	0		Andreas Rospini.
Hermannstadt	28.85	732.8	30.38	771.6	26.8	— 2.9	83	E			1		4			0.024	0.60		Prof. Reissenberger
Kremsmünster	28.98	736.1	30.39	772.0	33.8	1.0	92	Calm			0		10			0.157	4.0		Prof. C. Wagner.
Lemberg			30.51	774.9	13.3	—10 4	97	NE			1		3			0	0		Dr. T. Stanecki.
Nyiregyhaza																			Habzsuda Daniel.
Pola			30.32	770.1	47.8	8.8	73	WNW			2		3cs			0	0		I.R.Hydrographic Office.
Szegedin			30.40	772.1	33.4	0.8	82	Calm			0		7			0	0		Karl Stancel.
Trieste			30.35	770.8	46.9	8.3	75	Calm			0		1			0	0		Prof. V. Farolfi.
Vienna			30.41	772.4	30.9	— 0.6	98	E			1		10			0.240	6.1	Snowing	I. R. Central Met. Obs'y.

Note.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 7 p. m., local time. The elevation of Gratz is 343.5 meters, or 1,126.9 feet; Hermannstadt, 407.8 meters, or 1,337.9 feet; Kremsmünster, 383.6 meters, or 1,258.5 feet.

BELGIAN SERIES.

Furnished by the coöperation of J. C. Houzeau, Director of the Royal Observatory at Brussels.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Arlon			30.39	771.8	42.1	5.6	82	SW			2		7			0.138	3.5		Royal Observatory.
Brussels			30.30	769.5	45.1	7.3	94	NNW			2		10		NNE	0.663	16.85	Raining	
Furnes			30.30	769.6	43 0	6.1	89	N			3		10.			0.717	18.2		
Maseyck			30.29	769.3	48.4	9.1	91	W			2		10			0.453	11.5		

Note.—In the originals, the weather is occasionally given in general notes.

BRITISH SERIES

Furnished by the coöperation of Robert H. Scott, Esq., Director of the Meteorological Office, London, Alexander Buchan, Secretary of the Scottish Meteorological Society, Edinburgh, and the respective Observers.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Aberdeen			30.16	766.1	41.0	5.0		SSW	11	4.9			2			0.140	3.56	Blue sky	William Boswell.
Ardrossan			30.21	767.3	45	7.2		SW			4		2					Blue sky	William McNeil.
Armagh, Observatory			30.26	768.6	42.5	5.8		S	14	6.3			2					*D. clouds	S. Call, for Dr. Robinson.
Birr Castle, (Parsonstown)			30.29	769.4	45.0	7.2		SSW			1		0					Blue sky	J. Dreyer.
Bradford			30.33	770.4	44.1	6.7		W			1		0			0.02	0.5	Blue sky	J. McLandsborough.
Bridgetown, (Barbados)			30.07	763.8	84.5	29.2		NE			2		7					*D. clouds	Sergt. J. F. Halanen, A.
Cambridge, Observatory			30.35	770.9	46.0	7.8		WNW			1		5					*D. clouds	H. Todd. [H.C.
Cardington			30.37	771.4	44.0	6.7		W			1		8					Overcast	John McLaren.
Carlisle																			T. Bell, for J. Cartmell.
Chatham, School M. E			30.38	771.6	46.0	7.8		SW			0		0?					Overcast?	Maj. C. N. Martin, R.E.
Dartmoor	28.88	733.5	30.43	772.9	45.6	7.6		W			1		6					*D. clouds	R. E. Power.
Davos Platz, (Switzerland)	25.09	637.3			44.8	7.1	53	Calm			0		0			0	0	Blue sky	Francis Redford, M. A.
Donaghadee			30.25	768.3	43	6.1		SW			4		3					*D. clouds	J. Mac Gowan.
Dover			30.32	770.1	45	7.2		NNW			2		7					Raining	J. Costello.
Eccles, (near Manchester)			30.32	770.1	48.4	9.1		SW	4.8	2.1								Blue sky	Thomas Mackereth.
Falmouth, Observatory			30.41	772.4	47.0	8.3		WSW			1		3					Foggy	The Staff.
Fort Napier, (Natal)	27.70	703.6	29.93	760.2	81.2	27.3		E			2		3					*D. clouds	P'vt. G. Salmon, A. H. C
Free Town, (Sierra Leone)			29.90	759.4	88	31.1		E			0		3					*D. clouds	
Galway, Queen's College			30.19	766.8	47	8.3		SW			2		2					*D. clouds	Prof. A. H. Curtis.
Gibraltar, (Mediterranean)			30.40	772.1	61.0	16.1		E			3		4					*D. clouds	Corpl. C. Aitken, A.H.C.
Glasgow, Observatory			30.20	767.1	42.5	5.8		SW			2		1					Blue sky	Lewis Stuart.
Great Yarmouth			30.33	770.4	43	6.1		NW			1		4					Foggy	G. T. Watson.
Greenwich, Royal Obs'y			30.37	771.4	45.9	7.7		N			1		10			Blank	Blank	Misty	The Staff, for G. B. Airy.
Guernsey			30.38	771.6	48	8.9		SE			1		7					*D. clouds	Dr. S. E. Hoskins.
Helston			30.39	771.9	50	10.0		NE			4		8k			0	0	Gloomy	M. P. Moyle.
Holyhead			30.37	771.4	47	8.3		SSW			3		3					*D. clouds	John Tilston.
Kew, Observatory			30.38	771.6	45.2	7.3		NW	2	0.9			10					Raining	The Staff.
Kingstown			30.31	769.9	46	7.8		SSW			3		1					Blue sky	George Mitchell.
Leicester Museum			30.36	771.1	45.7	7.6		Calm			0		0					Hazy	Wm. J. Harrison, F.G.S.
Malta, (Mediterranean)			30.20	767.1	58.4	14.7		NW			2		4k					*D. clouds	Corp'l. P. Bravis, A.H.C.
Nairn			30.06	763.5	43	6.1		SW			2		5					½ clouded	W. D. Penny.
Nassau, (Bahamas)			30.15	765.8	71.6	22.0		NE			0		1					*D. clouds	Surg. Maj. Henry.
Nottingham, Observatory			30.37	771.4	47.5	8.4		SW			1		1k			0	0	Blue sky	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			30.35	770.9	47.7	8.7		SW			2		9s					*D. clouds	Rev. Stephen Whitty.
Oxford, Radcliffe Obs'y			30.37	771.4	44	6.7		Calm			0		8					Overcast	J. Lucas.
Plymouth			30.38	771.6	46.6	8.1		W			1		2					*D. clouds	John Merrifield.
Roche's Point			30.31	769.9	47	8.3		W			2		2					Fine	W. Kennedy.
Saint Ann's Head			30.36	771.1	48	8.9		SSW			3		6					Showery	John C. Walker.
Saint Helier, (Jersey)			30.39	771.9	49.7	9.7		NNE			2		5					½ clouded	A. P. Amy.
Sandwick Manse, (Orkneys)			30.01	762.2	40.2	4.6		SW	18	8.0			2					*D. clouds	Rev. C. Clouston, LL. D.
Scarborough																			F. Shaw.
Scutari Cemetery, (Turkey)			30.14	765.5	39.8	4.3		NE			3		10					Drizzling	Sergt. W. H. Lyne.
Sheffield			30.32	770.1	44.9	7.2		SW			1		4			0	0	Blue sky	W. F. Cooper.
Silloth Rectory			30.28	769.1	48.0	8.9	73	SW			2		0			0.090	2.29	Blue sky	Rev. Francis Redford.
Stonyhurst, Observatory			30.34	770.6	44.1	6.7		SW			2							Blue sky	Rev. S. J. Perry.
Stornoway, Lews C., (Hebr.)			29.95	760.7	39	3.9		SW			3		10					Thunder-storm	John Smith.
Stratfield Turgiss			30.38	771.6	45.8	7.7		NW			2		5					*D. clouds	Rev. Charles H. Griffith.
Thurso			30.00	762.0	40	4.4		SSW			2		7					*D. clouds	John Trotter.
Truro, Royal Institution			30.41	772.4	51	10.6		W			4		5					*D. clouds	W. Newcombe.
Valencia, Observatory			30.26	768.6	49.2	9.6		SSW	34	15.2			4					*D. clouds	The Staff.
SUB-SERIES.																			
Calf of Man, (Isle of Man)					45	7.2		SW			3		0			0	0		Henry Mercer.
Cape Good Hope, Obs'y			29.94	760.5	79.5	26.4	60	S	32	14.3		0	1						The Staff, for E. J. Stone.
Hobart Town, (Tasmania)			29.50	749.3	66.0	18.9	100	W			5		4n			0	0		Francis Abbott, F.R.A.S.
Leith, Restalrig Park			30.24	768.1	43.1	6.2		SW			3					0.21	5.3	Fine	Andrew Gibb.
Mauritius, Observatory			29.92	760.0	85.6	29.8	57	N	17.1	7.6		8	4		N	0	0	*D. clouds	C. Meldrum.
Melbourne, Observatory			29.93	760.2	62.2	16.8	60	SW	12	5.4			3			0	0	Very fine	R. L. J. Ellery.
Monach L't-house, (Hebrides)			29.90	759.4	47	8.3		SW			7		10			0.3	7.6		J. Youngclause.
North Unst, (Shetland Is.)			29.90	759.4	41	5.0		W			6	3	4	W		Blank	lank		Robert Burnet.

NOTE.—Generally, the originals do not give the relative humidity, rain-fall, or distinction between upper and lower clouds. The originals give the wind direction to 32 points and weather by the Beaufort notation. The originals give the barometer for Aberdeen, Cardington, Galway, Oxford, St. Helier, Sandwick, Scarborough, Stonyhurst, Leith, Monach and North Unst as read off and the cloudiness for Stornoway by the scale 0 to 4. The wind-force is given by the scale 0 to 12 in the official series; 0 to 6 in the sub-series; except in lbs. per square foot for Greenwich and Hobart Town. The rain-fall is measured at Aberdeen at 10 a. m.; Bradford, 9 a. m.; Hobart Town, 7:30 a. m.; Nottingham, 6 p. m.; Mauritius, 9 a. m., local time. The elevation of Dartmoor is 1,400 feet, or 426.7 meters; Davos Platz, 5,105? feet, or 1,556.0? meters; Fort Napier, 2,200 feet, or 670.6 meters. *Detached clouds.

By authority of the MINISTER OF FOREIGN AFFAIRS.

COSTA RICA SERIES.

Furnished by the coöperation of Senor Federico Maison, Director of the Central Office of Statistics and Meteorology.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
San Jose																			

DANISH SERIES.

Furnished by the coöperation of Captain N. Hoffmeyer, Director of the Royal Danish Meteorological Institute at Copenhagen.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Copenhagen			30.20	767.1	38.3	3.5	95	SW			2		9						
Fanöe			30.25	768.3	40.6	4.8	97	WSW			4		7						
Godthaab, (Greenland)			29.04	737.5	9.7	-12.4	77	SW			6		10						
Stykkisholm, (Iceland)			29.11	739.4	32.4	0.2	96	S			4		8						
Thorshavn, (Faröe)			29.69	754.2	42.3	5.7	74	WSW			4		5						
Vestervig			30.18	766.5	38.5	3.6	97	SW			2		3						

NOTE.—The originals give the wind-force by the scale 0 to 6; occasionally, weather by Vienna symbols; no distinction between the amount of upper and lower clouds.

FRENCH SERIES.

Furnished by the co-operation of His Excellency, U. J. Le Verrier, Director of the Paris Observatory, and the respective Observers.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Alengon	.....	.....	30.35	771.0	48.2	9	94	W	.....	.....	2	.....	10	.....	.....	0.024	0.6	Covered	Normal School.
Amiens	.....	.....	30.25	768.3	48.2	9.0	92	SW	.....	.....	3	.....	0	.....	.....	0	0	Clear	Normal School.
Avignon	.....	.....	30.39	772.0	46.4	8	75	N	.....	.....	1	.....	0	.....	.....	0	0	Very clear...	Normal School.
Bar-sur-Seine	.....	.....	30.37	771.3	51.6	10.9	65	SSW	.....	.....	1	.....	5n	.....	.....	0	0	Cloudy.....	C. Saillard.
Beaumette, (near Angers)	.....	.....	30.35	771.0	48.7	9.3	86	W	15.4	6.9	.....	.....	.....	.....	W	0	0	.....	Beaumette Observ'tory.
Beauvais	.....	.....	30.31	769.9	49.1	9.5	86	W	.....	.....	3	.....	10	.....	WNW	0.020	0.50	Covered	Normal School.
Besangon	.....	.....	30.24	768.0	40.3	4.6	71	S	.....	.....	2	.....	0	.....	.....	0	0	Clear	Normal School.
Bourg en Bresse	.....	.....	30.47	773.8	44.1	6.7	65	SSW	.....	.....	1	.....	0	.....	.....	0	0	Clear	Normal School.
Bourges	.....	.....	30.32	770.1	49.3	9.6	92	SW	.....	.....	2	.....	2	.....	SW	0	0	Slightly cl'dy	Normal School.
Brest	.....	.....	30.35	770.9	51.6	10.9	84	WSW	.....	.....	1	.....	8k	.....	WSW	0.276	7.00	.....	Naval Observatory.
Carcassonne	.....	.....	30.37	771.5	52.9	11.6	68	E	.....	.....	.....	.....	0	.....	.....	0	0	Clear	Normal School.
Caen	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Chartres	.....	.....	30.31	769.9	47.7	8.7	98	SW	.....	.....	2	.....	7	.....	NE	0	0	.....	Normal School.
Châlons-sur-Marne	.....	.....	30.34	770.6	48.6	9.2	73	S	.....	.....	2	.....	10n	.....	.....	0	0	Covered	Normal School.
Clermont	.....	.....	30.39	771.8	55.0	12.8	66	N	.....	.....	2	.....	8	.....	NE	0	0	Very cloudy	Puy de Dome Obs'y.
Commercy	.....	.....	30.34	770.7	43.3	6.3	81	SE	.....	.....	1	.....	2ks	.....	SW	0	0	Slightly cl'dy	Normal School.
Commune de Gréasque*	.....	.....	30.41	772.5	46.4	9.1	71	NW	.....	.....	2	.....	8	.....	NW	0	0	.....	M. Kina.
Grenoble	.....	.....	30.35	771.0	38.7	3.7	69	ENE	.....	.....	1	.....	0	.....	.....	0	0	Clear	Normal School.
La Roche-sur-Yon	.....	.....	30.43	772.9	51.8	11.0	93	NE	.....	.....	2	.....	10	.....	.....	0	0	Covered	Normal School.
Le Mans	.....	.....	30.36	771.2	49.8	9.9	89	W	.....	.....	2	.....	8	.....	W	0.008	0.2	Very cloudy	Normal School.
Lons-Le-Saulnier	.....	.....	30.39	771.8	40.8	4.9	71	E	.....	.....	1	.....	0	.....	.....	0	0	Clear	Normal School.
Lorient	.....	.....	30.43	772.9	52.9	11.6	64	N	.....	.....	2	.....	5	.....	NNW	0.031	0.8	Cloudy.....	Naval Observatory.
Mâcon	.....	.....	30.41	772.4	37.4	3	89	SSW	.....	.....	1	.....	0	.....	.....	0	0	Clear	Normal School.
Metz	.....	.....	30.42	772.7	42.6	5.9	69	E	.....	.....	1	.....	5	.....	E	0	0	.....	M. Schuster.
Mirecourt	.....	.....	30.42	772.6	43.2	6.2	79	S	.....	.....	2	.....	2	.....	E	0	0	Slightly cl'dy	Normal School.
Nismes	.....	.....	30.32	770.1	56 8	13.8	58	N	.....	.....	2	.....	0	.....	.....	0	0	Clear	Normal School.
Orleans	.....	.....	30.34	770.5	47.5	8.6	86	SW	.....	.....	1	.....	8	.....	W	0	0	Very cloudy	Normal School.
Paris, Observatory	.....	.....	30.32	770.2	46.0	7.8	94	S	.....	.....	2	.....	10	.....	N	.....	.....	Raining	National Observatory.
Parthenay	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Privas	.....	.....	30.40	772.1	46.8	8.2	.....	SSW	.....	.....	2	.....	0	.....	.....	0	0	Clear	Normal School.
Rochefort, Observatory	.....	.....	30.44	773.1	48.6	9.2	95	SW	.....	.....	3	.....	10	.....	NE	Inap.	Inap.	Rainy.....	Naval Observatory.
Rouen	.....	.....	30.31	769.9	47.7	8.7	84	NNW	.....	.....	4	.....	10	.....	NW	0.165	4.2	Covered	Normal School.
Saint Lo	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Tarbes	29.22	742.2	30.32	770.1	51.8	11	75	W	.....	.....	2	.....	0	.....	.....	0	0	Clear	Normal School.
Villefranche	.....	.....	30.38	771.6	42.6	5.9	85	SE	.....	.....	1	.....	2	.....	N	0	0	Slightly cl'dy	Normal School.
Sub-Series.																			
Fort de France, Martinique	.....	.....	29.91	759.7	75.6	24.2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	L'Abbé Marchési.
Marseilles	.....	.....	30.35	770.8	54.3	12.4	63	NW	.....	.....	2	.....	9	.....	.....	0	0	Cloudy.....	Marseilles Observatory.
Mont-Louis	25.14	638.6	30.46	773.6	46.9	8.3	42	NE	5.6	2.50	.....	.....	0	.....	.....	0	0	.....	—. Falguère.
Montsouris, Paris	.....	.....	30.30	769.7	46.2	7.9	97	SW	.....	.....	2	.....	10	.....	SW	0.028	0.7	Light rain...	Montsouris Observatory
Perpignan	.....	.....	30.40	772.2	51.8	11.0	75	N	1.9	0.83	.....	.....	2	.....	NW	0	0	.....	Dr. Fines.
Pic du Midi, (Summit,) H. P.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. Baylac.
Pic du Midi, (Plantade,) H. P.	22.76	578.1	.....	.....	45.0	7.2	.....	W	.....	.....	1	.....	0	.....	.....	0	0	Clear	General de Nansouty.
Saint Maur, (near Paris)	.....	.....	30.32	770.0	46.6	8.1	89	SSW	.....	.....	1	.....	10	.....	.....	.....	.....	Light rain....	E. Renou.
Toulouse	.....	.....	30.47	773.8	48.6	9.2	86	S	.....	.....	1	.....	0	.....	.....	0	0	Light fog.....	Toulouse Observatory.
Tours	.....	.....	30.37	771.5	48.9	9.4	89	W	.....	.....	1	.....	10	.....	.....	.....	.....	Rainy.....	C. Marquet.
Versailles, (near Paris)	.....	.....	30.32	770.2	47.8	8.8	92	W	.....	.....	1	.....	10	.....	.....	0.039	1.00	Light rain...	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai)	.....	.....	30.44	773.1	36.3	2.4	86	N	6.0	2.67	.....	.....	0	.....	.....	0.252	6.4	.....	Marc Dechevrens, S. J.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Note.—Generally, the originals give the wind-force by the scale 0 to 7; no distinction between upper and lower clouds, and, in the official series, the amount by the scale 0 to 4; the rain-fall as measured at 7, 8 or 9 a. m., local time; at Clermont, 9 a. m. of the following day; the weather in general terms as published. The elevation of Clermont is 388 meters, or 1,272.9 feet; Commune de Gréasque, 322 meters, or 1,056.4 feet; Tarbes, 308 meters, or 1,010 feet; Mont-Louis, 1,586.40 meters, or 5,204.8 feet; Pic du Midi, (Summit,) 2,877 meters, or 9,439.1 feet; Pic du Midi, (Plantade,) 2,366 meters, or 7,762.6 feet. In correcting the Mont-Louis barometric observations for altitude, the constant 135. millimeters has been added. *Bouches-du-Rhône

GERMAN SERIES.

Furnished by the coöperation of Professor Dr. G. Neumayer, Director of the German Naval Observatory, Hamburg.

Bamberg	.....	.....	30.31	769.9	41.0	5.0	69	SW	.....	.....	2	.....	10	.....	.....	0	0	.....	Prof. T. Hch.
Berlin	.....	.....	30.32	770.0	45.1	7.3	86	SE	.....	.....	2	.....	10	.....	.....	0.291	7.4	.....	Prof. Arndt.
Breslau	.....	.....	30.37	771.4	35.6	2.0	87	SE	.....	.....	2	.....	9	.....	.....	0.008	0.2	.....	Royal University Obs'y
Carlsruhe	.....	.....	30.37	771.3	45.3	7.4	66	SSW	.....	.....	1	.....	9	.....	.....	0	0	.....	A. Senz.
Cassel	.....	.....	30.32	770.2	47.3	8.5	65	S	.....	.....	3	.....	8	S	.....	0	0	.....	Dr. H. Möhl.
Crefeld	.....	.....	30.28	769.1	47.6	8.6	85	S	.....	.....	1	.....	10	.....	.....	0	0	.....	Director Lose.
Emden	.....	.....	30.38	771.7	44.2	6.8	93	WSW	.....	.....	2	.....	10	.....	.....	0	0	.....	Prof. Prestel.
Frankfort on the Main	.....	.....	30.37	771.3	44.6	7.0	70	SSW	.....	.....	1	.....	7	.....	.....	0	0	.....	Physical Society.
Friedrichshafen	28.92	734.6	30.43	772.8	36.7	2.6	91	SW	.....	.....	3	.....	0?	.....	.....	0.303	7.7	Raining?.....	M. Wilhelm.
Hamburg	.....	.....	30.30	769.5	43.3	6 3	93	NW	.....	.....	1	.....	10	.....	.....	0.575	14.6	Foggy	Captain F. Hegemann.
Kiel	.....	.....	30.26	768.5	41.4	5.2	94	W	.....	.....	3	.....	10	.....	.....	0.220	5.6	.....	Prof. G. Karsten.
Königsberg, (Prussia)	.....	.....	30.38	771.6	27.0	— 2.8	79	SE	.....	.....	2	.....	5	.....	.....	0	0	.....	Prof. E. Luther.
Köslin	.....	.....	30.29	769.4	33.4	0.8	.....	S	.....	.....	1	.....	10	.....	.....	.....	.....	Raining.....	H. Müller.
Leipsic	.....	.....	30.35	770.8	42.4	5.8	90	SW	.....	.....	2	.....	10	.....	.....	0.213	5.4	Rainy.....	Prof. Bruhns.
Memel	.....	.....	30.38	771.6	18.1	— 7.7	86	SE	.....	.....	3	.....	5cs	.....	.....	0	0	.....	Reinbrecht & Skalweit.
Münster	.....	.....	30.27	768.9	46.2	7.9	91	N	.....	.....	1	.....	10	.....	.....	0.024	0.6	.....	Prof. E. Heis.
Neufahrwasser	.....	.....	30.33	770.3	30.6	— 0.8	92	S	.....	.....	3	.....	10	.....	.....	0.114	2.9	.....	A Lothe.
Posen	.....	.....	30.34	770.7	36.1	2.3	91	SE	.....	.....	2	.....	10	.....	.....	0.063	1.6	.....	Dr. Magener.
Strassburg, (in Alsace)	.....	.....	30.41	772.4	41.9	5.5	70	SW	.....	.....	1	.....	2	.....	.....	0	0	.....	Dr. Schur.
Stuttgart	.....	.....	30.35	771.0	45.5	7.5	68	N	.....	.....	1	.....	8	.....	.....	0.094	2.4	.....	Prof. Schoder.
Thorn	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Dr. Hasenbalg.
Treves, (Trier)	.....	.....	30.29	769.3	44.6	7.0	71	SSW	.....	.....	1	.....	10	.....	.....	0.169	4.3	.....	Prof. Flesch.
Weissenburg, (Bavaria)	28.89	731.5	30.36	771.1	43.0	6.1	69	Calm	.....	.....	0	.....	9	.....	.....	0	0	.....	Dr. von Bebber.
Wustrow, Naval School	.....	.....	30.26	768.7	36.5	2.5	100	W	.....	.....	3	.....	10	.....	.....	0.244	6.2	.....	E. F. Schütz.
German Naval Series.																			
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Note.—The elevation of Friedrichshafen is 413.4 meters, or 1,356.3 feet; Weissenburg, 431 meters, or 1,414.0 ft. In the originals the distinction between the amount of upper and lower clouds is not made. It is not always certain that the remarks in the weather column refer to the moment of observation.

GREEK SERIES.

Furnished by the cooperation of Professor Dr. J. F. Julius Schmidt, Director of the Royal Observatory at Athens.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Athens			30.09	764.3	53.1	11.7		NE										Half clear...	

Note.—The originals give the barometer corrected, but not reduced to sea-level; occasionally the kind of clouds; the weather as published. They omit the humidity wind-force, amount of cloudiness and rain-fall.

ITALIAN SERIES.

Furnished by the cooperation of His Excellency the Minister of Agriculture, Industry and Commerce, and the respective Observers.

Udine			30.30	769.6	47.1	8.4	43	Calm	0	0		5				0	0		Prof. Giovanni Clodig
Stelvio	22.34	567.5			29.5	— 1.4		SE			2	0				0	0		Signora Ernesta Manfredi.
Valdobbia	22.36	567.9			30.9	— 0.6	70	WNW			1	0				0	0		Ab. Dom. Mongini.
Padua			30.30	769.7	43.2	6.2	69	ESE	1.8	0.8		0				0	0		Prof. Dott. Lor nzoni.
Vicenza			30.30	769.7	44.6	7.0	66	SE	3.1	1.4		0				0	0		Conte Alm. Da Schio.
Verona			30.31	769.8	45.0	7.2	71	E			1	0				0	0		Dott. B. Bertoncelli.
Bergamo	28.95	735.3	30.31	769.8	42.8	6.0	61	SW			2	1				0	0		Prof Trionfini Carlo.
Domodossola			30.34	770.5	43.3	6.3	56	Calm			0	0				0	0		Prof. Giuseppe Ulza.
Milan			30.36	771.2	41.9	5.5	88	WNW			1	5		WNW		0	0		Ab. Gio. Capelli.
Pavia			30.37	771.3	39.6	4.2	87	SW			1	8		SW		0	0		Prof. Gio. Cantoni.
Moncalieri			30.38	771.6	40.8	4.9	83	ENE	1.3	0.6		1				0	0		Prof. P. F. Denza.
Mondovi	28.39	721.0	30.37	771.3	42.4	5.8	48	NNW			1	1		N		0	0		Prof. D. C. Bruno.
Porto Maurizio			30.40	772.1	52.3	11.3	51	SSW			2	1				0	0		Prof. L. Vassallo.
Genoa			30.35	770.8	54.5	12.5	53	S	3.1	1.4		4				0	0		Prof. G. M. Garibaldi.
Piacenza			30.38	771.6	39.2	4.0	85	W	6.9	3.1		2		N		0	0		Dott. G. Manzi.
Parma			30.34	770.6	44.8	7.1	71	WNW			4	1				0	0		Prof. P. Pigorini.
Florence			30.35	771.0	42.8	6.0	76	NW			2	0				0	0		Cav. F. Meucci.
Leghorn			30.35	770.8	50.2	10.1	72	N	2.5	1.1		2				0	0		Prof. P. Monte.
Siena	29.09	738.9	30.33	770.3	48.4	9.1	95	NW	0.7	0.3		0				0	0		Prof. L. Toscani.
Urbino	28.76	730.5	30.37	771.3	42.1	5.6	67	NNE			2	0				0	0		Prof. P. Serpieri.
Pesaro			30.37	771.5	43.7	6.5	69	NW	19.2	8.6		1		NW		0	0		Prof. Luigi Guidi.
Ancona			30.30	769.5	45.7	7.6	64	NW			2	2				0	0		Prof. F. De— Bosis.
Grosseto			30.35	770.8	55.2	12.9	58	NNE			2	3		SE		0	0		Avv. P. Ponticelli.
Rome			30.31	769.8	50.4	10.2	40	NE	6.3	2.8		1				0	0		Prof's. P. Secchi & L. Respighi.
Naples, O. U.			30.28	769.2	55.4	13.0	35	N			4	8		NE		0	0		Prof. L. Palmieri.
Lecce			30.23	767.9	48.0	9.4	51	NNE	15.0	6.7		6		N		0	0		Prof. C. De—Giorgi.
Cosenza			30.25	768.3	50.4	10.2	72	WNW	9.4	4.2		7				0	0		Prof. F. D. Conti.
Cagliari																			Prof. A. Pacinotti.
Ilposto, (Sicily)			30.17	766.3	57.4	14.1	56	S			2	3		SW		0	0		Prof. F. Cafiero.
Palermo			30.24	768.2	55.8	13.2	60	NW	8.1	3.6		9				0	0		Prof. G. Cacciatore.
Caltanissetta	28.22	716.7	30.21	767.3	47.1	8.4	81	WNW			4	7		SE		0	0		Prof. A. Pagani.
Siracusa			30.20	767.0	56.1	13.4	56	NNE			1	8		NE		0.03	1.0	Light rain...	Prof. V. Giuliano.
Sub-Series.																			
Naples, S. R.			30.30	769.5	52.7	11.5	46	NW	1.8	0.8		6		NW		0	0		Prof. F. Brioschi.

Note.—The originals give the wind-force by the scale 0 to 4, or the velocity in kilometers per hour; generally, no distinction between upper and lower clouds; occasionally the weather by the Vienna symbols. The elevation of Stelvio is 2,543.0 meters, or 8,342.9 feet; Valdobbia, 2,548.0 meters or 8,359.3 feet; Bergamo, 379.6 meters, or 1,245.3 feet; Mondovi, 556 meters, or 1,824.2 feet; Siena, 348.5 meters, or 1,143.3 feet; Urbino, 451 meters, or 1,479.7 feet; Caltanissetta, 570.3 meters, or 1,871.0 feet.

JAPANESE SERIES.

Furnished by the coöperation of the Imperial University of Tokei, Japan.

Tokei			29.74	755.4	46	7.8		Calm	0	0		10				0	0		Prof. P. V. Veeder.

Note.—The originals give the amount of cloudiness by the scale 0 to 4 without distinguishing between upper and lower clouds. The rain-fall is measured at 7 a. m., local time

MEXICAN SERIES.

By authority of the Secretary of Public Works.

Furnished by the coöperation of Senor Mariano Barcena, Director of the Central Meteorological Observatory in the City of Mexico.

Mexico																		Mariano Barcena. Vicente Reyes. Miguel Perez. (Engineers in charge.)	

Note.—The elevation of Mexico is 2,290 meters, or 7,512.9 feet. The rain-fall is measured at 6 a. m., local time.

NETHERLANDS' SERIES.

Furnished by the cooperation of Professor Buys Ballot, Director of the Royal Meteorological Institute of the Netherlands at Utrecht.

Flushing			30.36	771.2	45.0	7.2		NE			2					0.079	2.0		
Groningen			30.26	768.6	44.1	6.7		SW								0	0		
Heider			30.31	769.9	46.0	7.8		WSW			1					0	0		
Utrecht			30.28	769.2	43.9	6.6	91	W			2		10			0.256	6.5	Dull	

Note.—The originals give the wind-pressure in kilograms per square meter; for Utrecht, they give the weather as published, from which the amount of cloudiness is taken by the scale 0 to 4, without distinguishing between upper and lower clouds. It is assumed that the barometer readings have been reduced to sea-level.

NORWEGIAN SERIES.

Furnished by the cooperation of Professor H. Mohn, Director of the Royal Norwegian Meteorological Institute at Christiania.

Bergen			30.00	762.0	39.2	4.0	80	SW	24.2	10.8			10			0.10	2.6	Raining	
Brönö			29.37	745.9	36.1	2.3	80	S	17.9	8			10			0.11	3.0		
Christiania			29.90	759.5	38.3	2.4	93	Calm	0	0			2			0	0		
Tromsö			29.32	744.7	33.6	0.9	79	SW	20.1	9			10			0	0		

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols. The cloudiness and weather at Bergen refer to 2h., p. m., local time, instead of 1h., 4 m...

PORTUGUESE SERIES.

Furnished by the coöperation of J. C. de Brito Capello, Director of the Meteorological Observatory of the Infante Don Luiz at Lisbon.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Angra, (Azores)	.....	.....	30.14	765.5	55.0	12.8	79	SSE	4.3	1.9	.....	.....	3	.....	.....	0	0	.....	Dr. J. A. Sampaio.
Campo Major	.....	.....	30.42	772.7	51.8	11.0	75	ENE	8.9	4.00	.....	.....	2	.....	.....	0	0	.....	Dr. A. M. R. dos Santos.
Funchal, (Madeira)	.....	.....	30.30	769.6	65.5	18.6	66	SW	2.2	0.97	.....	.....	2	.....	.....	0	0	.....	Capt. D. A. de Cunha.
Lisbon	.....	.....	30.43	772.8	53.4	11.9	85	NE	3.8	1.7	.....	.....	10	E	.....	0	0	.....	The Observatory.
Ponta Delgada, (Azores)	.....	.....	30.17	766.4	58.6	14.8	74	ESE	4.3	1.9	.....	.....	4	W	.....	0	0	.....	
.....																			

Note.—The originals give the wind-velocity in kilometers per hour; occasionally, the weather by the Vienna symbols; the amount of cloudiness without distinguishing between upper and lower clouds; the barometer corrected but not reduced to sea-level. The rain-fall at Lisbon is measured at noon, instead of 0 h. 6 m., p. m.

RUSSIAN SERIES.

Furnished by the coöperation of Professor H. Wild, Director of the Imperial Central Physical Observatory of Russia, at St. Petersburg.

Warsaw	.....	.....	30.48	774.3	23.0	— 5.0	93	SE	11	5	.....	.....	7	.....	.....	.....	.....	.....	Astronomical Obs.
Wilna	.....	.....	30.57	776.5	15.8	— 9.0	67	SE	2	1	.....	.....	2	.....	.....	.....	.....	.....	Astronomical Obs.
Dorpat	.....	.....	30.49	774.5	12.4	—10.9	89	SE	4	2	.....	.....	2	.....	.....	.....	.....	.....	Physical Cabinet.
St. Petersburg	.....	.....	30.54	775.8	13.6	—10.2	89	S	13	6	.....	.....	10	.....	.....	.....	.....	Light snow..	Central Physical Obs.
Kuopio	.....	.....	30.30	769.7	6.8	—14.0	.....	S	18	8	.....	.....	10	.....	.....	.....	.....	.....	Ch. Forsten.
Kieff	.....	.....	30.48	774.1	24.1	— 4.4	98	NNE	2	1	.....	.....	10	.....	.....	.....	.....	Light snow..	Physical Cabinet.
Nikolaiev	.....	.....	30.38	771.6	30.4	— 0.9	90	NE	7	3	.....	.....	8	.....	.....	.....	.....	.....	Kurdakof.
Kertch	.....	.....	30.19	766.8	36.5	2.5	91	NE	13	6	.....	.....	10	.....	.....	.....	.....	.....	Lagorio.
Moscow	.....	.....	30.76	781.2	17.2	— 8.2	91	SSE	7	3	.....	.....	8	.....	.....	.....	.....	.....	Meteorological Obs.
Lugan	.....	.....	30.47	773.9	16.9	— 8.4	70	NNE	13	6	.....	.....	2	.....	.....	.....	.....	.....	Meteorological Obs.
Archangel	.....	.....	30.45	773.5	10.8	—11.8	100	S	9	4	.....	.....	10	.....	.....	.....	.....	.....	Ogorodnikof.
Tiflis	28.89	733.7	30.37	771.3	39.0	3.9	88	Calm	0	0	.....	.....	10	.....	.....	.....	.....	Raining.....	Physical Observatory.
Astrakhan	.....	.....	30.57	776.5	28.0	— 5.0	87	NE	11	5	.....	.....	0	.....	.....	.....	.....	.....	Sebastianof.
Kasan	.....	.....	30.85	783.6	— 4.7	—20.4	88	Calm	0	0	.....	.....	2	.....	.....	.....	.....	.....	Physical Cabinet.
Orenburg	.....	.....	30.68	779.2	—11.4	—24.1	56	NE	13	6	.....	.....	0	.....	.....	.....	.....	.....	Tschernischei.
Ekaterinburg	29.41	747.1	30.48	774.1	— 0.6	—18.1	86	WSW	11	5	.....	.....	0	.....	.....	.....	.....	.....	Meteorogical Obs.
Nukuss	.....	.....	30.50	774.6	21.9	— 5.6	85	NE	11	5	.....	.....	.....	.....	.....	.....	.....	.....	
Kasaly	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Bobrof.
Tashkend	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Michelson.
Barnaul	.....	.....	30.32	770.0	— 3.8	—19.9	93	S	4	2	.....	.....	9	.....	.....	.....	.....	.....	Meteorological Obs.
Yeniseisk	.....	.....	30.19	766.8	—33.0	—36.1	72	N W	2	1	.....	.....	0	.....	.....	.....	.....	.....	Marks.
Irkutsk	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Usolzef.
Peking, (China)	.....	.....	30.42	772.6	27.1	— 2.7	57	W	9	4	.....	.....	0	.....	.....	.....	.....	.....	Physical Observatory.
Nertchinsk	27.95	709.9	30.34	770.7	—20.4	—29.1	85	Calm	0	0	.....	.....	0	.....	.....	.....	.....	.....	Meteorological Obs.
Vladivostock	.....	.....	30.15	765.9	13.8	—10.1	90	NW	9	4	.....	.....	0	.....	.....	.....	.....	.....	
Nikolaievsk, on the Amoor	.....	.....	.....	.....	— 3.5	—19.7	.....	W	2	1	.....	.....	10	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols; they omit the rain-fall. The elevation of Tiflis is 409 meters, or 1,341.8 feet; Ekaterinburg, 306.4? m., or 1,005.2? ft.; Tashkend, 494.2? m., or 1,621.3? ft.; Irkutsk, 392 m., or 1,286 ft.; Nertchinsk, 592.0? m., or 1,942.2? ft.

SPANISH SERIES.

Furnished by the coöperation of Antonio Aguilar, Director of the Royal Observatory at Madrid, and of Don Cecilio Pujazon, Captain R. N. Director of the Naval Observatory at San Fernando.

Madrid	.....	.....	30.54	775.6	41.5	5.3	85	NE	5.2	2.33	.....	0	9	.....	.....	0	0	Almost cov'd	Royal Observatory.
San Fernando	.....	.....	30.41	772.4	64.2	17.9	63	ESE	4.9	2.2	.....	0	3	.....	NW	.....	.....	.....	Naval Observatory.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

Note.—The originals give the weather in general terms, as published; rain-fall for San Fernando from preceding to following midnight; wind-velocity for Madrid in kilometers per hour.

SWEDISH SERIES.

Furnished by the coöperation of Professor R. Rubenson, Director of the Royal Swedish Meteorological Institute, at Stockholm, and of Dr. H. H. Hildebrandsson, Chief of the Meteorological Division of the Upsala Observatory.

Haparanda	.....	.....	29.97	761.3	11.1	—11.6	93	SSE	.....	.....	6	.....	10	.....	.....	.....	.....	Snowing....	
Umea	.....	.....	29.82	757.4	23.4	— 4.8	100	SW	.....	.....	8	.....	10	.....	.....	.....	.....	Snowing.....	
Hernosand	.....	.....	29.75	755.6	31.3	— 0.4	96	S	.....	.....	4	.....	10	.....	.....	0.055	1.4	.....	
Stockholm	.....	.....	29.98	761.5	32.7	0.4	100	SSW	.....	.....	6	.....	10	.....	.....	0.028	0.7	.....	
Wisby	.....	.....	30.15	765.9	33.4	0.8	92	SSW	.....	.....	6	.....	10	.....	.....	.....	.....	Raining.....	
Sub-Series.																			
Upsala	.....	.....	29.95	760.7	32.7	0.4	94	S	17.9	8.0	.....	.....	10	.....	.....	0.055	1.40	.....	Dr. Hildebrandsson.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

Note.—The originals give the wind-force by the scale 0 to 6, and Upsala also velocity in meters per second; occasionally, the weather by the Vienna symbols, or in general terms; no distinction between the amount of upper and lower clouds. The rain-fall is measured at 8 a. m., local time.

SWISS SERIES.

Furnished by the coöperation of Professor R. Wolf, Director of the Observatory at Zurich, and of Professor E. Plantamour, Director of the Observatory at Geneva.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Geneva	28.95	735.4	30.40	772.2	46.2	7.9	46	SSW	.....	.....	1	.....	0	.....	.....	0	0	Clear	The Observatory.
Zurich	28.72	729.5	30.40	772.2	41.0	5.0	51	W	.....	.....	1	.....	1	.....	.....	0	0	Clear	The Observatory.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—For Geneva the corresponding departures from the normal values are: Barometer, +7.9 mm; Thermometer, +6.4 cent.; Relative Humidity, —82 per cent.

NOTE.—The rain-fall is measured at Zurich at 7 a. m. on the following day. The originals give the barometer corrected but not reduced to sea-level; the wind-force by the scale 0 to 4 for Zurich; the amount of cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The elevation of Geneva is 408 meters, or 1,339 feet, and that of Zurich 470 meters, or 1,542 feet.

TURKISH SERIES.

Furnished by the coöperation of A. Coumbary, Effendi, Director of the Central Observatory at Constantinople, and of Professor C. V. A. Van Dyck, Superintendent of the Lee Observatory at Beirut.

Constantinople	.....	.....	30.21	767.4	39.6	4.2	89	N	22	10.0	.....	.....	10	.....	NNE	0.252	6.4	Raining	
Fao, (Persian Gulf)	.....	.....	30.25	768.4	67.8	19.9	.....	SW	.....	.....	4	.....	10	.....	.....	.....	.....	Thunder-storm.	
Salonica	.....	.....	30.26	768.6	45.9	7.7	.....	NE	.....	.....	2	.....	10	.....	.....	.....	.....	.....	
Valona	.....	.....	30.09	764.2	49.6	9.8	.....	NW	.....	.....	2	.....	2	.....	.....	.....	.....	.....	
Varna	.....	.....	30.20	767.0	26.6	— 3.0	.....	N	.....	.....	3	.....	5	.....	.....	Rain	Rain	.....	
SUB-SERIES.																			
Beirut, (Syria,) Lee Obs'y	.....	.....	30.02	762.6	65.1	18.4	72	SW	.....	.....	1	.....	9ks	.....	SW	0.25	6.3	Overcast	Prof. C. V. A. Van Dyck.

NOTE.—The originals give the wind-force by the scale 0 to 7, (except Beirut, by the scale 0 to 12, and Constantinople velocity in meters per second;) the weather in general terms as published; no distinction between upper and lower clouds, and, except Constantinople and Beirut, the amount by the scale 0 to 4. It is assumed that the barometer is reduced to sea-level.

CANADIAN SERIES.

Furnished by the coöperation of Professor G. T. Kingston, Director of the Magnetic Observatory at Toronto, and Superintendent of the Meteorological Office of the Dominion of Canada, and the respective Observers. Those marked with a star (*) are also telegraphed daily to the office of the Chief Signal Officer, U. S. Army.

Bathurst, N. B	.....	.....	29.51	749.5	20.7	— 6.3	89	SW	4	1.8	.....	.....	10	.....	.....	.....	.....	.....	Hon. J. Ferguson.
Brockville, Ontario	.....	.....	29.33	745.0	37	2.8	.....	SW	13	5.8	.....	.....	10s	.....	SW	0.09	2.3	Light rain	W. R. Bigg.
*Chatham, N. B	.....	.....	29.61	752.1	17	— 8.3	91	Calm	0	0	.....	.....	Haze	.....	.....	0.05	1.3	Cloudy	G. A. Blair.
Charlottetown, P. E. Island	.....	.....	29.76	755.9	25	— 3.9	98	SE	15	6.7	.....	.....	10s	.....	.....	0	0	Cloudy	H. J. Cundall, C. E.
Cornwall, Ontario	.....	.....	29.25	742.9	36.9	2.7	90	SW	.....	.....	2	.....	10n	.....	.....	.....	.....	Raining	James Smith, M. A.
Dalhousie, N. B	.....	.....	29.55	750.6	.....	.....	.....	SW	.....	.....	1	.....	.....	.....	.....	0	0	Threatening	H. A. Johnson.
Esquimault, B. C	.....	.....	30.42	772.7	31.0	— 0.6	89	N	.....	.....	.....	0	0	.....	.....	0	0	Clear	W. H. Bevis.
Fredericton, N. B	.....	.....	29.63	752.6	25.0	— 3.9	87	Calm	0	0	.....	.....	10s	.....	.....	Inap.	Inap.	Cloudy	Prof. Harrison.
*Fort Garry, Manitoba	.....	.....	30.04	763.0	—32	—35.6	100	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	James Stewart.
Goderich, Ontario	.....	.....	29.50	749.3	25.7	— 3.5	82	NW	.....	.....	3	.....	10n	.....	.....	0.178	4.52	Threatening	H. J. Strang, M. A.
Granton, Ontario	28.20	716.3	29.31	744.5	35.0	1.7	.....	W	.....	.....	3	.....	10n	.....	SE	0	0	Cloudy	James Grant.
*Halifax, N. S	.....	.....	29.81	757.2	32	0.0	90	S	12	5.4	.....	.....	8n	.....	.....	Inap.	Inap.	Light rain	F. Allison, M. A.
Hamilton, Ontario	.....	.....	29.34	745.2	38.7	3.7	62	SW	.....	.....	2	10ck	0	SW	.....	0	0	Cloudy	G. Dickson.
Heart's Content, N. F	.....	.....	30.07	763.8	14	—10.0	100	Calm	.....	.....	0	1c	0	.....	.....	0	0	Fine	E. Weedon.
*Kingston, Ontario	.....	.....	29.36	745.7	36	2.2	74	SW	8	3.6	.....	.....	10n	.....	SW	0.02	0.5	Light rain	S. Woods, M. A.
*Montreal, Quebec	.....	.....	29.30	744.2	32	0.0	87	S	18	8.0	.....	.....	10n	.....	.....	0.04	1.0	Light snow	C. H. McLeod, C. E.
*Ottawa, Ontario	.....	.....	29.24	742.7	35	1.7	74	S	24	10.7	.....	.....	10n	.....	S	0.02	0.5	Light rain	J. B. Haney.
*Parry Sound, Ontario	.....	.....	29.19	741.4	31	— 0.6	93	SW	24	10.7	.....	.....	10n	.....	SW	0.15	3.8	Light rain	Rev. R. Mosley.
Port Dover, Ontario	.....	.....	29.37	746.0	36	2.2	100	SW	24	10.7	.....	.....	10n	.....	SW	0.35	8.9	Light rain	H. Morgan.
Port Hastings, N. S	.....	.....	29.88	758.9	22.7	— 5.2	.....	SE	3	1.3	.....	.....	.....	.....	.....	0	0	Fine	Peter Grant.
Port Stanley, Ontario	.....	.....	29.41	747.0	34	1.1	96	W	24	10.7	.....	.....	10n	.....	W	0.01	0.3	Light rain	M. Payne.
*Quebec, Quebec	.....	.....	29.36	745.7	29	— 1.7	89	S	1	0.4	.....	.....	10n	.....	S	0.10	2.5	Heavy snow	Capt. Ashe, R. N.
*Rockliffe, Ontario	.....	.....	29.10	739.1	34	1.1	88	NW	10	4.5	.....	.....	10s	.....	NW	Inap.	Inap.	Light rain	
St. John, N. B	.....	.....	29.67	753.6	34	1.1	89	SE	19	8.5	.....	.....	10n	.....	.....	0.170	4.32	Overcast	G. Murdoch, C. E.
*Saugeen, Ontario	.....	.....	29.30	744.2	30	— 1.1	84	W	12	5.4	.....	.....	10n	.....	.....	0.02	0.5	Cloudy	K. Stewart.
Stayner, Ontario	.....	.....	29.19	741.4	33	0.6	90	W	15	6.7	.....	2ck	2n	W	W	0	0	Cloudy	R. J. Cole.
Stratford, Ontario	28.02	711.7	29.31	744.5	34.7	1.5	92	W	28	12.5	.....	.....	10n	.....	.....	0.172	4.37	Windy	C. J. MacGregor, M. A.
*Sydney, C. B	.....	.....	29.94	760.5	20	— 6.7	96	S	7	3.1	.....	5k	8s	SW	SW	0	0	Cloudy	T. C. Hill.
*Toronto, Ontario	.....	.....	29.31	744.5	36	2.2	97	SW	14	6.3	.....	.....	10n	.....	SW	0.01	0.3	Cloudy	Magnetic Observatory.
Woodstock, Ontario	.....	.....	29.32	744.7	34.7	1.5	100	W	18	8.0	.....	.....	10s	.....	.....	0.23	5.8	Cloudy	J. Montgomery.
SUB-SERIES.																			
St. Johns, Newfoundland	.....	.....	30.18	766.6	12.0	—11.1	.....	S	.....	.....	.....	.....	10n	.....	.....	0	0	Fair	John Delany.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
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.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—The originals for Brockville, Charlottetown, Port Dover, Port Stanley, Stayner, St. Johns, N. F. and those telegraphed, give the amount of cloudiness by the scale to 4. The elevation of Granton is 1,015 feet, or 309.4 m.; Stratford, 1,182 feet, or 360.3 m.

UNITED STATES SERIES.

Furnished by the coöperation of Bvt. Brig. Gen. Albert J. Myer, Chief Signal Officer, U. S. Army.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Upper. 0—10.	Clouds. Amount. Low'r. 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain fall or melted snow in the past 24 hours. Inches.	Rain fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Albany, N. Y.	.....	.....	29.58	751.3	38	3.3	80	S	18	8.0	.....	.....	10s	.....	S	0	0	Cloudy	
Alpena, Mich.	.....	.....	29.36	745.7	18	— 7.8	84	W	20	8.9	.....	.....	10s	.....	W	Inap.	Inap.	Cloudy	
Atlantic City, N. J.	.....	.....	29.72	754.9	36	2.2	100	S	14	6.3	.....	.....	10n	.....	S	0.05	1.3	Light rain	
Augusta, Ga.	.....	.....	30.00	762.0	58	14.4	94	S	4	1.8	.....	2ck	2s	S	S	0	0	Fair	
Baltimore, Md.	.....	.....	29.70	754.4	38	3.3	100	Calm	0	0	.....	.....	10n	.....	.....	0.14	3.6	Light rain	
Barnegat, N. J.	.....	.....	29.70	754.4	35	1.7	100	SW	16	7.2	.....	.....	10s, fg	.....	.....	0.03	0.8	Cloudy	
Bismarck, Dakota	28.01	711.4	29.86	758.4	—12	—24.4	74	SW	2	0.9	.....	5k	Haze	NW	.....	0	0	Fair	
Boston, Mass.	.....	.....	29.66	753.4	40	4.4	82	SW	5	2.2	.....	.....	10s, ha.	.....	SW	0	0	Cloudy	
Breckenridge, Minn.	.....	.....	30.05	763.3	—16	—26.7	70	NW	8	3.6	.....	0	0	.....	.....	0	0	Clear	
Buffalo, N. Y.	.....	.....	29.31	744.5	37.5	3.1	100	SW	16	7.2	.....	.....	10n	.....	SW	0.23	5.8	Light rain	
Burlington, Vt.	.....	.....	29.39	746.5	39	3.9	73	S	24	10.7	.....	.....	10s	.....	.....	0	0	Cloudy	
Cairo, Ill.	.....	.....	29.98	761.5	37	2.8	71	N	18	8.0	.....	0	8s	.....	W	0.08	2.0	Fair	
Cape Hatteras, N. C.	.....	.....	29.88	758.9	52	11.1	100	SW	10	4.5	.....	.....	Fog	.....	.....	0.03	0.8	Foggy	
Cape Henry, Va.	.....	.....	29.82	757.4	55	12.8	100	SW	10	4.5	.....	.....	10n	.....	SW	0.04	1.0	Light rain	
Cape Lookout, N. C.	.....	.....	29.97	761.2	54	12.2	100	SW	16	7.2	.....	.....	Fog	.....	SW	0.03	0.8	Foggy	
Cape May, N. J.	.....	.....	29.74	755.4	38	3.3	100	S	24	10.7	.....	.....	10n	.....	.....	0.03	0.8	Light rain	
Charleston, S. C.	29.90	607.0	30.03	762.7	57	13.9	93	S	4	1.8	.....	2c	Fog	W	.....	0.01	0.3	Fair	
Cheyenne, Wyoming	.....	.....	29.84	757.9	9	—12.8	100	W	8	3.6	.....	0	0	.....	.....	0	0	Clear	
Chicago, Ill.	.....	.....	29.80	756.8	8	—13.3	78	W	20	8.9	.....	0	0	.....	.....	0	0	Clear	
Cincinnati, Ohio	.....	.....	29.62	752.3	44	6.7	84	W	18	8.0	.....	.....	10ks	.....	W	0.23	5.8	Cloudy	
Cleveland, Ohio	.....	.....	29.46	748.3	40	4.4	91	SW	20	8.9	.....	.....	10s	.....	W	0.02	0.5	Threatening	
Corsicana, Tex.	.....	.....	29.91	759.7	53	11.7	100	SW	10	4.5	.....	.....	Fog	.....	.....	0.28	7.1	Foggy	
Davenport, Iowa	.....	.....	30.10	764.5	2	—16.7	72	W	8	3.6	.....	0	0	.....	.....	0.01	0.3	Clear	
Denison, Tex.	.....	.....	30.07	763.8	36	2.2	90	N	20	8.9	.....	.....	10s	.....	N	0.10	2.5	Cloudy	
Denver, Col.	24.72	627.9	29.94	760.5	12	—11.1	80	N	1	0.4	.....	0	0	.....	.....	0	0	Clear	
Detroit, Mich.	.....	.....	29.46	748.3	29	— 1.7	78	W	16	7.2	.....	.....	10s	.....	W	0.02	0.5	Cloudy	
Dodge City, Kan.	27.52	699.0	30.02	762.5	14	—10.0	80	N	10	4.5	.....	0	2s	.....	.....	0	0	Clear	
Dubuque, Iowa	.....	.....	30.02	762.5	— 1	—18.3	93	NW	6	2.7	.....	0	Haze	.....	.....	Inap.	Inap.	Clear	
Duluth, Minn.	.....	.....	29.84	757.9	— 5	—20.6	93	N	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Eastport, Me.	.....	.....	29.64	752.8	35	1.7	90	S	19	8.5	.....	.....	10s	.....	S	0	0	Cloudy	
Erie, Pa.	.....	.....	29.37	746.0	42	5.6	83	SW	16	7.2	.....	.....	10s	.....	SW	0	0	Cloudy	
Escanaba, Mich.	.....	.....	29.54	750.3	7	—13.9	77	NW	23	10.3	.....	.....	10s	.....	NW	0.	0	Cloudy	
Fort Gibson, Indian Ter.	.....	.....	30.13	765.3	28	— 2.2	67	N	14	6.3	.....	0	0	.....	.....	0.01	0.3	Clear	
Ft. St. Michael, Alaska	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Fort Sill, Indian Ter.	28.57	735.8	30.10	766.1	24	— 4.4	38	N	8	3.6	.....	8cs	0	W	.....	0	0	Cloudy	
Fort Sully, Dakota	28.30	718.8	30.12	765.0	9	—14.4	76	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Florence, Arizona	28.48	723.4	30.03	762.7	45	7.2	.....	NW	.....	.....	.....	8k	0	NW	.....	0	0	Fair	
Galveston, Tex.	.....	.....	30.00	762.0	60	15.6	100	SW	2	0.9	.....	.....	Fog	.....	.....	0.04	1.0	Foggy	
Grand Haven, Mich.	.....	.....	29.64	752.8	18	— 7.8	76	W	33	14.8	.....	.....	10n	.....	W	0.04	1.0	Light snow.	
Indianapolis, Ind.	.....	.....	29.82	757.4	27	— 2.8	88	NW	14	6.3	.....	0	8s	.....	W	0.09	2.3	Clearing	
Indianola, Tex.	.....	.....	30.00	762.0	60	15.6	100	S	4	1.8	.....	.....	10n	.....	.....	0.22	5.6	Light rain	
Jacksonville, Fla.	.....	.....	30.10	764.5	62	16.7	94	S	7	3.1	.....	.....	10s	.....	.....	0	0	Cloudy	
Keokuk, Iowa	.....	.....	30.14	765.5	8	—13.3	78	NW	13	5.8	.....	2c	0	NW	.....	0	0	Fair	
Key West, Fla.	.....	.....	30.11	764.8	72	22.2	85	SE	8	3.6	.....	0	0	.....	.....	0	0	Clear	
Kittyhawk, N. C.	.....	.....	29.88	758.9	54	12.2	100	SW	14	6.3	.....	.....	10n	.....	SW	0.05	1.3	Light rain	
Knoxville, Tenn.	.....	.....	29.72	754.9	59	15.0	87	S	20	8.9	.....	.....	10n	.....	W	1.27	32.3	Light rain	
La Crosse, Wis.	.....	.....	29.97	761.2	— 2	—18.9	69	W	12	5.4	.....	0	0	.....	.....	0	0	Clear	
Leavenworth, Kan.	.....	.....	30.30	769.6	10	—12.2	79	NW	3	1.3	.....	.....	2s	.....	.....	0	0	Fair	
Louisville, Ky.	.....	.....	29.78	756.4	44	6.7	92	W	18	8.0	.....	.....	10s	.....	W	0.25	6.3	Cloudy	
Lynchburg, Va.	.....	.....	29.75	755.6	46	7.8	89	S	1	0.4	.....	.....	10n	.....	.....	0.15	3.8	Light rain	
Malone, N. Y.	.....	.....	29.21	741.9	43	6.1	92	S	24	10.7	.....	.....	10n	.....	S	0.16	4.1	Light rain	
Marquette, Mich.	.....	.....	29.57	751.1	5	—15.0	75	W	24	10.7	.....	0	0	.....	.....	0	0	Clear	
Memphis, Tenn.	.....	.....	29.92	760.0	51	10.6	93	NW	10	4.5	.....	.....	10s	.....	NW	0.92	23.4	Cloudy	
Milwaukee, Wis.	.....	.....	29.78	756.4	2	—16.7	86	W	30	13.4	.....	0	0	.....	.....	0.01	0.3	Clear	
Mobile Ala.	.....	.....	30.05	763.3	62	16.7	94	S	5	2.2	.....	.....	Fog	.....	.....	0	0	Foggy	
Montgomery, Ala.	.....	.....	29.98	761.5	64	17.8	91	S	8	3.6	.....	.....	10s	.....	SW	0.09	2.3	Threatening	
Morgantown, W. Va.	28.49	723.6	29.51	749.5	49	9.4	96	SW	8	3.6	.....	.....	10n	.....	SW	0.28	7.1	Heavy rain	
Mt. Washington, N. H.	23.12	587.2	29.48	748.8	25	— 3.9	100	W	48	21.5	.....	.....	Fog	.....	.....	0	0	Foggy	
Nashville, Tenn.	.....	.....	29.79	756.7	55	12.8	87	W	9	4.0	.....	.....	10ks	.....	W	0.31	7.9	Cloudy	
New Haven, Conn.	.....	.....	29.68	753.9	39	3.9	82	S	5	2.2	.....	.....	Fog	.....	.....	0	0	Foggy	
New London, Conn.	.....	.....	29.71	754.6	37	2.8	100	S	10	4.5	.....	.....	Fog	.....	.....	0.01	0.3	Dense fog	
New Orleans, La.	.....	.....	30.02	762.5	66	18.9	94	SW	5	3.6	.....	.....	10ks	.....	SW	0.03	0.8	Cloudy	
Newport, R. I.	.....	.....	29.72	754.9	38	3.3	80	S	13	5.8	.....	.....	10s	.....	SW	0	0	Threatening	
New York, N. Y.	.....	.....	29.68	753.9	35	1.7	100	SE	8	3.6	.....	.....	Fog	.....	.....	0	0	Dense fog	
Norfolk, Va.	.....	.....	29.82	757.4	53	11.7	96	S	8	3.6	.....	.....	10n	.....	S	0.04	1.0	Light rain	
North Platte, Neb.	27.13	689.1	29.98	761.5	1.4	—16.9	86	W	13	5.8	.....	0	0	.....	.....	0	0	Clear	
Omaha, Neb.	29.01	736.8	30.22	767.6	4	—15.6	74	NW	6	2.7	.....	0	0	.....	.....	0	0	Clear	
Oswego, N. Y.	.....	.....	29.36	745.7	43	6.1	75	S	12	5.4	.....	.....	10n	.....	.....	0.16	4.1	Light rain	
Pembina, Dakota	.....	.....	30.00	762.0	—28	—33.3	45	NW	3	1.3	.....	0	0	.....	.....	0	0	Clear	
Philadelphia, Pa.	.....	.....	29.69	754.1	37	2.8	100	W	7	3.1	.....	.....	10n, fog	.....	W	0.01	0.3	Light rain	
Pike's Peak, Col.	17.45	442.7	29.64	752.8	0	—17.8	100	SW	32	14.3	.....	.....	Fog	.....	.....	0.22	5.6	Light snow	
Pittsburgh, Pa.	.....	.....	29.47	748.5	46	7.8	92	SW	4	1.8	.....	.....	10n	.....	SW	0.16	4.1	Light rain	
Port Huron, Mich.	.....	.....	29.36	745.7	32	0.0	73	W	28	12.5	.....	.....	10s	.....	W	0.03	0.8	Threatening	
Portland, Me.	.....	.....	29.90	751.8	35	1.7	80	S	13	5.8	.....	.....	10s	.....	.....	0	0	Cloudy	
Portland, Oregon	.....	.....	30.34	770.6	32	0.0	69	E	2	0.9	.....	0	0	.....	.....	0	0	Clear	
Punta Rassa, Fla.	.....	.....	30.15	765.8	65.4	18.6	89	E	5	2.2	.....	8cs	0	SW	.....	0	0	Fair	
Rochester, N. Y.	.....	.....	29.31	744.5	41	5.0	73	SW	16	7.2	.....	.....	10s	.....	W	0.11	2.8	Cloudy	
Salt Lake City, Utah	25.07	652.0	30.00	762.0	27	— 2.8	88	NW	6	2.7	.....	.....	10s	.....	.....	0.18	4.6	Cloudy	
Sandy Hook, N. J.	.....	.....	29.64	752.8	38	3.3	90	S	2	0.9	.....	.....	10s	.....	S	0	0	Cloudy	
San Diego, Cal.	.....	.....	30.13	765.3	52	11.1	86	NE	4	1.8	.....	0	8s	.....	NE	0	0	Cloudy	
San Francisco, Cal.	.....	.....	30.19	766.8	51	10.6	78	SW	4	1.8	.....	.....	10s	.....	.....	0.21	5.3	Cloudy	
Santa Fé, N. M.	23.15	588.8	29.72	754.9	27	— 2.8	48	SE	5	2.2	.....	0	5s	.....	.....	0	0	Fair	
Savannah, Ga.	.....	.....	30.06	763.5	61	16.1	88	SW	2	0.9	.....	0	Fog	.....	.....	0	0	Clear	
Shreveport, La.	.....	.....	29.96	761.0	61	16.1	100	NW	10	4.5	.....	.....	10s	.....	SW	0.61	15.5	Cloudy	
Smithville, N. C.	.....	.....	30.00	762.0	55	12.8	93	SW	8	3.6	.....	.....	Fog	.....	SW	0.10	2.5	Foggy	
Springfield, Mass.	.....	.....	29.64	752.8	38	3.3	90	S	8	3.6	.....	.....	10s	.....	S	0	0	Threatening	
St. Louis, Mo.	.....	.....	30.07	763.8	24	— 4.4	74	NW	20	8.9	.....	0	0	.....	.....	0.07	1.8	Clear	
St. Marks, Fla.	.....	.....	30.11	764.8	59	15.0	94	W	2	0.9	.....	.....	Fog	.....	.....	0	0	Foggy	
St. Paul, Minn.	.....	.....	29.95	760.7	— 7	—21.7	80	SW	8	3.6	.....	0	0	.....	.....	0	0	Clear	
St. Paul's Island, Alaska	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Thatcher's Island, Mass.	.....	.....	29.70	754.4	37	2.8	80	S	20	8.9	.....	.....	10s	.....	S	0	0	Cloudy	
Toledo, Ohio	.....	.....	29.51	749.5	37	2.8	71	SW	20	8.9	.....	.....	10ks	.....	SW	0.04	1.0	Cloudy	
Tucson, Arizona	27.59	700.8	30.14	765.5	27	— 2.8	.....	S	.....	.....	.....	2c	0	NW	.....	0	0	Fair	
Tybee Island, Ga.	.....	.....	30.05	763.3	55	12.8	93	S	6	2.7	.....	2cs	2s	SW	.....	0	0	Fair	
Vicksburg, Miss.	.....	.....	29.97	761.2	63	16.7	100	SW	12	5.4	.....	.....	10n f	.....	SW	0.03	0.8	Light rain	
Virginia City, M. T.	24.27	616.4	29.75	755.6	2	—16.7	86	Calm	0	0	.....	1k	0	NW	.....	0.01	0.3	Clear	
Washington, D. C.	.....	.....	29.69	754.1	40	4.4	100	S	8	3.6	.....	.....	Fog	.....	.....	0.21	5.3	Light rain	
Wilmington, N. C.	.....	.....	29.97	761.2	61	16.1	94	SW	19	8.5	.....	0	8cs	.....	SW	0.05	1.3	Clearing	

UNITED STATES SERIES.—CONTINUED.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Wood's Holl, Mass.	.....	.....	29.76	755.9	37	2.8	90	S	20	8.9	.....	.....	10s	.....	S	0	0	Threatening	
Yankton, Dakota	28.81	731.8	30.25	768.3	0	—17.8	69	W	12	5.4	.....	0	0	.....	.....	0.01	0.3	Clear	
Yuma, Arizona	.....	.....	30.07	763.8	45	7.2	.....	E	.....	.....	.....	0	2s	.....	NE	0	0	Fair	
Sub-Series.																			
Kingston, Jamaica, W. I.	.....	.....	30.22	767.6	73	22.8	76	N	6	2.7	.....	2c	2s	SE	.....	0	0	.....	James Gall.
Navassa, W. I.	.....	.....	.....	.....	78	25.6	.....	NE	.....	.....	1	.....	.....	.....	.....	0	0	Clear	F. M. Everett.
Clifton, Ja., W. I.	27.22	691.4	30.03	762.7	65	18.3	83	NE	3.0	1.3	.....	2c	0	E	.....	0.20	5.1	Fine, clear	C. Partridge.
Paramaribo, D. Guiana, S. A.	.....	.....	30.03	762.7	81	27.2	91	E	.....	.....	2	5k	6ks	E	.....	0.070	1.78	½ cloudy	C. J. Hering.
Batavia, Dutch Guiana, S. A.	30.04	762.9	.....	.....	77 0	25	.....	E	.....	.....	.....	.....	.....	.....	.....	0.226	5.76	Rainy	Dr. H. Groot.
Medellin, Colombia, S. A.	25.19	639 8	.....	.....	64.2	17.9	84	Calm	.....	.....	0	7cs,k	2s	.....	.....	0.04	1.0	Cloudy	Thomas Herran.
York Factory, B. A.	.....	.....	29.58	751.3	—30.0	—34.4	.....	SW	19	8.5	.....	.....	10n	.....	.....	0.05	1.3	Snowing	J. Fortescue, W. Wood.
Honolulu, Oahu, H. I.	.....	.....	30.10	764.5	64	17.8	94	NNW	.....	.....	3	.....	.....	.....	.....	0	0	Clear	Daniel Smith.
Makawao, Maui, H. I.	.....	.....	29.95	760.7	56	13.3	87	Calm	.....	.....	0	0	0	.....	.....	0	0	.....	F. L. Clarke.

NOTE.—The originals give the amount of cloudiness by the scale 0 to 4, except York Factory, Makawao, Medellin and Paramaribo. The elevation of the barometer at Bismarck is 1,677 feet, or 511.1 meters; Cheyenne, 6,057.3 ft., or 1,846.2 m.; Clifton, about 2,892 ft., or 881.7 m.; Denver, 5,135 ft., or 1,565.2 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Florence, 1,550 (?) ft., or 472.5 (?) m.; Makawao, 2,205 ft., or 672.1 m.; Morgantown, 1,027.9 ft., or 313.3 m.; Medellin, 4,876 ft., or 1,486.2 m.; Mt. Washington, 6,285 ft., or 1,915.6 m.; North Platte, 2,846 ft., or 867.4 m.; Omaha, 1,054.6 ft., or 321.4 m.; Pike's Peak, 14,150.7 ft., or 4,313.1 m.; Salt Lake City, 4,362.2 ft., or 1,329.6 m.; Santa Fé, 6,862.2 (?) ft., or 2,091.6 (?) m.; Tucson, 2,513 (?) ft., or 772.1 (?) m.; Virginia City, 5,480 (?) ft., or 1,670.3 (?) m.; Yankton, 1,278 ft., or 389.5 m. The following constants are added in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Denver, 5.22 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fé, 6.64 in.; Tucson, 2.50 in.; Virginia City, 5.48 in. The elevation of Batavia is about 6 feet; the barometric readings need the addition of 0.2 mm. or 0.01 in. for reduction to sea-level.

UNITED STATES NAVAL SERIES.

By authority of the **SECRETARY OF THE NAVY.**

Furnished by the coöperation of the Navy Department, through Commodore Daniel Ammen, U. S. N., Chief of Bureau of Navigation.

STATIONS AND VESSELS.	True course toward—	Hourly rate in knots.	*Barometer as reported.		Temperature of the Air.		Relative Humidity.	Wind.				Clouds.				Rain-fall or melted snow in the past 24 hours.		State of Ocean.	Direction of swell from—	Weather.	Observer.
								Direction.	Velocity		Force.	Amount.		Direction.							
												Up'er	Low'r	Up'er	Low'r						
			Inches.	Millimeters.	Fahrenheit.	Centigrade.	Per cent.	From—	Miles per hour.	Meters per second.	0—10.	0—10.	0—10.	From—	From—	Inches.	Millimeters.				
Naval Academy, Annapolis, Md.			29.37	746.0	38	3.3	94	S			3		10			0.65	16.5			Rain & fog.	
Naval Hospital, Annapolis, Md.			29.75	755.6	36	2.2	100	SW			2		10			0	0				
Navy Yard, Mare Island, Cal.			30.25	768.3	49.5	9.7	100	SSE			2		10							Cloudy	
Navy Yard, Norfolk, Va.			29.98†	761.5†	53	11.7		S			3		10n							Raining	
Navy Yard, Pensacola, Fla.			30.15	765.8	65	18.3	94	S			2		7		E	0	0			‡D. clouds	
Navy Yard, Portsmouth, N.H.			29.63	752.6	36	2.2		S			4									Threatening	
Adams, Port Royal, S. C.			30.10	764.5	58	14.4	94	SW			3		1		NE					Foggy	
Ajax, Port Royal, S. C.			30.00	762.0	56	13.3		SSW			2		3		N					Pleasant	
Canonicus, New Orleans, La.			29.81†	757.2†	63	17.2		SW			3		10							Misty	
Catskill, Port Royal, S. C.			30.06†	763.5†	57	13.9		S			2		2		SW			Rippling.		Fair	
Colorado, New York, N. Y.			29.78	756.4	37	2.8		SW			0–1		0			0	0			Foggy	
Dictator, Port Royal, S. C.			30.10	764.5	54	12.2	100	SSW			3		3			0	0			Clear	
Essex, Norfolk, Va.			29.85	758.2	56	13.3	94	SSW			2		10							Showery	
Hartford, Hampton Roads, Va.			29.00	736.6	50	10.0		S			2		10			0.25	6.3			Dense fog	
Huron, Port Royal, S. C.			30.15	765.8	59.5	15.3	97	S			2		3		NE					‡D. clouds	
Lehigh, Port Royal, S. C.			30.65†	778.5†	54	12.2	87	SE			3									Dense fog	
Manhattan, Port Royal, S. C.			30.10†	764.5	57	13.9		S			2		2		NE			Smooth		‡D. clouds	
Michigan, Erie, Pa.			29.82	757.4	40	4.4	56	S			3		10		S					Cloudy	
Monongahela, Baltimore, Md.			29.72	754.9	38	3.3		Calm			0		n							Rain & fog	
New Hampshire, Port Royal, S. C.			30.25	768.3	57	13.9		SW			2		2					Smooth		‡D. clouds	
Ossipee, New Orleans, La.			30.11	764.8	61	18.9		NNW			2									Foggy	
Plymouth, Pensacola, Fla.			30.09	764.3	67	19.4	84	SSE			4		7		SSW	0	0	Smooth		Cloudy, hazy	
Santee, Annapolis, Md.			29.30	746.5	38	3.3	100	S			3		10							Rain & fog	
St. Louis, League Island, Pa.			29.58	751.3	37.5	3.1		SSW			2		10		SSW	0	0			Light rain	
Tallapoosa, Washington, D. C.			29.62	752.3	38	3.3	100	SSW			2		10n							Rain & fog	
Wabash, Boston, Mass.			29.78	756.4	38	3.3		SW			2–3		10		NE					Misty	
Wyoming, Washington, D. C.			30.19	766.8†	39	3.9		W			1		10		W					Raining	

* It is not known that the barometer is corrected for temperature, instrumental error or elevation. † Aneroid Barometer. ‡ Detached clouds.

UNITED STATES MARINE SERIES

REPORTED TO THE OFFICE OF THE CHIEF SIGNAL OFFICER OF THE ARMY.

NAMES OF VESSELS.	True course toward—	Hourly rate in knots.	Barometer reduced to sea-level.		Temperature of the Air.		Relative Humidity.	Wind.				Clouds.				State of Ocean.	Direction of swell from—	Weather.	Observer.
								Direction.	Velocity.		Force.	Amount.		Direction.					
												Up'er	Low'r	Upper.	Lower.				
			Inches.	Millimeters.	Fahrenheit.	Centigrade.	Per cent.	From—	Miles per hour.	Meters per second.	0—10.	0—10.	0—10.	From—	From—				
PACIFIC MAIL S. S. CO. MARINE SERIES. Furnished by the coöperation of ————, President; Williams, Blanchard & Co., Agents.																			
OCCIDENTAL AND ORIENTAL S. S. CO. MARINE SERIES. Furnished by the coöperation of George H. Bradbury, President; T. H. Goodman, Agent.																			
NORTH GERMAN LLOYD OF BREMEN MARINE SERIES. Furnished by the coöperation of A. Schumacher & Co., Agents.																			
Steamer Nürnberg, N. 45°, 11′, W. 39°, 44′	WSW ½ W		29.89	759.2	41.0	5.0		Var.			6		..k		NW	Rough.	NW	Blue sky	Capt. A. Jaeger.
MARINE SERIES. (Miscellaneous.) Furnished by the coöperation of Captain James Jorgensen.																			
Schooner Addie Fuller, N. 33°, 17′, W. 78°, 05′	W by N.	5	29.96	761.0	62	16.7	88	SW	11	4.9		2c	2d		W	Short sea.		Clear	Capt. James Jorgensen.

NOTE.—The schooner Addie Fuller gives the amount of cloudiness by the scale 0 to 4.

COLLATED AT THE OFFICE OF THE CHIEF SIGNAL OFFICER OF THE ARMY, WASHINGTON, D. C.

The records which appear in this Bulletin are copied from the regular exchanges of this office, made in each instance in compliance with an especial request and are published for the uses of the coöperating observers. The barometric readings in the first two columns are reduced to freezing and their respective standards; those in the second two also to mean sea-level. The "weather" is generally published as given.

When the distinction between the upper and lower strata of clouds is not reported, the *kinds* or *types*, viz: cirrus, cumulus, stratus, nimbus, scud, fracto, pallio, haze, fog and smoke, as indicated, respectively, by the letters c, k, s, n, d, f, p, hz., fg. and sm'e, are generally published with the amount in the lower-cloud column. The distinction between the upper and lower strata is carefully made in the United States Series and a portion of the Canadian Series, and the types are indicated by the above letters or their combinations in the proper column.

Albert J. Myer

Brig. Gen. (Bvt., Asst.,) Chief Signal Officer, U. S. A

BULLETIN

OF

INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON JANUARY 21, 1877.

7:35 A. M. WASHINGTON mean time.

6:7 A. M. MEXICO mean time.
7:7 A. M. SAN JOSE mean time.
0:6 P. M. LISBON mean time.
0:28 P. M. MADRID mean time.
0:43 P. M. GREENWICH mean time.
0:53 P. M. PARIS mean time.
1:1 P. M. BRUSSELS mean time.
1:4 P. M. UTRECHT mean time.
1:18 P. M. BERNE mean time.

10:2 P. M. TOKEI mean time.

1:26 P. M. CHRISTIANIA mean time.
1:33 P. M. COPENHAGEN mean time.
1:33 P. M. ROME mean time.
1:37 P. M. BERLIN mean time.
1:49 P. M. VIENNA mean time.
1:55 P. M. STOCKHOLM mean time.
2:18 P. M. ATHENS mean time.
2:39 P. M. CONSTANTINOPLE mean time.
2:44 P. M. ST. PETERSBURG mean time.

ALGERIAN SERIES.

Furnished by the coöperation of General d'Endeville, Commandant Supérieur du Génie in Algeria.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Nemours			30.37	771.3	62.6	17.0	58	Calm			0		0			0	0	Clear	Charnot.
Algiers			30.37	771.3	56.5	13.6		W			1		10			0	0	Hidden	Peter.
La Calle			30.20	767.0	56.5	13.6	78	W			4		8			Inap.	Inap.	Cloudy	Fleury.
Tunis			30.14	765.6	55.4	13.0		N			3		1			0	0	Clear	Jacques.
Sfax																			
Salda			30.32	770.2	57.4	14.1	45	ENE			1		1			0	0	Clear	Millot.
Tebessa			30.20	767.1	39.2	4.0		W			2		3			0	0	Fair	Bourgeois.
Geriville			30.26	768.7	50.5	10.3	29	N			4		0			0	0	Clear	Lemaillot.
Laghouat			30.20	767.1	59.0	15.0	30	W			1		1			0	0	Clear	Guyot.
Biskra			30.16	766.0	61 7	16.5	44	NW			2		0			0	0	Clear	Kuntz.

NOTE.—In the originals the distinction between the amount of upper and lower clouds is apparently not made. The weather is published as given. The rain-fall is measured at 7 a. m., local time.

AUSTRIAN SERIES.

Furnished by the cooperation of Professor Ferdinand Osnaghi, Director of the Imperial and Royal Central Meteorological Institute at Vienna.

Agram			30.41	772.4	36.1	2.3	77	Calm			0		3			0	0		Prof. Ivan Stozir.
Cracow, I. R. Observatory			30.42	772.7	28.0	— 2.2	100	NE			1		0			0	0		Dr. Wierzbiski.
Eperies			30.38	771.7	32.2	0.1	69	Calm			0		0			0	0		Julius Mikolik.
Gratz	29.10	739 1	30.43	772.8	32.2	0.1	85	SW			2		10			0.157	4.0		Andreas Rospini.
Hermannstadt	28.87	733.2	30.39	771.9	28.4	— 2.0	78	E			2		10			0	0		Prof. Reissenberger
Kremsmünster	28.97	735.7	30.37	771.4	36.0	2.2	89	W			3		10			1.024	26.0		Prof. C. Wagner.
Lemberg			30.42	772.6	25.5	— 3.6	95	SE			1		4			0	0		Dr. T. Stanecki.
Nyiregyhaza																			Habzsuda Daniel.
Pola			30.24	768.2	44.4	6.9	48	E			3		9cs			0	0		I.R.Hydrographic Of'ce.
Szegedin			30.30	771.9	27 9	— 2.3	85	N			2		0			0	0		Karl Stancel.
Trieste			30.29	769.4	41.2	5.1	48	NNE			2		10			0	0	Cloudy	Prof. V. Farolfi.
Vienna			30.39	772.0	30.2	— 1.0	94	SE			1		10			0.142	3 6	Snowing	I. R. Central Met. Obs'y.

NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 7 p. m., local time. The elevation of Gratz is 343.5 meters, or 1,126.9 feet: Hermannstadt, 407.8 meters, or 1,337.9 feet; Kremsmünster, 383.6 meters, or 1,258.5 feet.

BELGIAN SERIES.

Furnished by the cooperation of J. C. Houzeau, Director of the Royal Observatory at Brussels.

Arlon			30.70	779.7	38.5	3.6	67	NE			2		0			0	0		Royal Observatory.
Brussels			30.67	779.1	41.9	5.5	87	NNE			0	1c	0	N		0	0	Light fog	
Furnes			30.64	778.2	44.8	7.1	86	SSW			2		2			0.055	1.4		
Maeseyck			30.65	778.6	35.8	2.1	100?	SW			2		10			0.028	0 7		

NOTE.—In the originals, the weather is occasionally given in general notes.

BRITISH SERIES

Furnished by the coöperation of Robert H. Scott, Esq., Director of the Meteorological Office, London, Alexander Buchan, Secretary of the Scottish Meteorological Society, Edinburgh, and the respective Observers.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Aberdeen			30.22	767.6	45.6	7.6		SW	18	8.0			1			0	0	Blue sky	William Boswell.
Ardrossan																			William McNeil.
Armagh, Observatory			30.36	771.1	46.5	8.1		SSW	22	9.8									S. Call, for Dr. Robinson.
Birr Castle, (Parsonstown)			30.42	772.7	48.9	9.4		SSW			1		10					Overcast	J. Dreyer.
Bradford																0	0		J. McLandsborough.
Bridgetown, (Barbados)			30.06	763.5	83.8	28.8		NE			2		6					*D. clouds	Sergt. J. F. Halanen, A.
Cambridge, Observatory			30.61	777.5	46.0	7.8		SSW			1		5					*D. clouds	H. Todd. [H.C.
Cardington			30.62	777.7	43.0	6.1		SW			1		1					Blue sky	John McLaren.
Carlisle																			T. Bell, for J. Cartmell.
Chatham, School M. E.			30.66	778.7	42.2	5.7		Calm			0		7					Blue sky	Maj. C. N. Martin, R.E.
Dartmoor	29.06	738.1	30.64	778.2	43.6	6.4		W			6		5					*D. clouds	R. E. Power.
Davos Platz, (Switzerland)	25.08	637.0			26.5	— 3.1	71	NE			1		8			0.06	1.60	*D. clouds	Francis Redford, M. A.
Donaghadee			30.35	770.9	48	8.9		SW			4		10					Overcast	J. Mac Gowan.
Dover			30.65	778.5	47	8.3		SW			2		5					½ clouded	J. Costello.
Eccles, (near Manchester)			30.50	774.7	45.4	7.4		SSW	3.4	1.5			7					*D. clouds	Thomas Mackereth.
Falmouth, Observatory			30.60	777.2	48.6	9.2		SSE			4		3					*D. clouds	The Staff.
Fort Napier, (Natal)	27.60	701.0	29.84	757.9	86.4	30.2		NE			2		0					Blue sky	Pvt. G. Salmon, A. H. C
Free Town, (Sierra Leone)			29.91	759.7	84	28.9		Calm			0		4					*D. clouds	
Galway, Queen's College			30.32	770.1	46	7.8		SW			5		8					*D. clouds	Prof. A. H. Curtis.
Gibraltar, (Mediterranean)			30.38	771.6	60.0	15.6		E			2		7					*D. clouds	Corpl. C. Aitken, A.H.C.
Glasgow, Observatory			30.29	769.4	45.1	7.3		S			2		10					Raining	Lewis Stuart.
Great Yarmouth			30.60	777.2	44	6.7		SW			2		4					Hazy	G. T. Watson.
Greenwich, Royal Obs'y			30.64	778.2	48.8	9.3		SSW			1		1					Blue sky	The Staff, for G. B. Airy.
Guernsey			30.64	778.2	46.6	8.1		SSE			2		0					Blue sky	Dr. S. E. Hoskins.
Helston			30.57	776.5	49	9.4		SW			4		2c			0.3	7.6	*D. clouds	M. P. Moyle.
Holyhead			30.47	773.9	49	9.4		SW			4		3					*D. clouds	John Tilston.
Kew, Observatory			30.65	778.5	44.0	6.7		SSE					2					*D. clouds	The Staff.
Kingstown			30.44	773 2	50	10.0		WSW			4		5					*D. clouds	George Mitchell.
Leicester Museum			30.59	777.0	44.8	7.1		SW			1		9					*D. clouds	Wm. J. Harrison, F.G.S.
Malta, (Mediterranean)			29.98	761.5	55.4	13.0		N			2		6k					*D. clouds	Corp'l. P. Bravis, A.H.C.
Nairn			30.13	765.3	47	8.3		SW			2		5					¼ clouded	W. D. Penny.
Nassau, (Bahamas)			30.15	765.8	77	25.0		NE			1		1					*D. clouds	Surg. Maj. Henry.
Nottingham, Observatory			30.58	776.7	46.4	8.0		SSW			3		5k		WSW	0	0	*D. clouds	F. J. Lowe, F. R. S.
Oscott, St. Mary's College			30.58	774.7	43.8	6.6		SSW			2		9					Foggy	Rev. Stephen Whitty.
Oxford, Radcliffe Obs'y			30.60	777.2	44	6.7		S			1		7					*D. clouds	J. Lucas.
Plymouth			30.60	777.2	48.7	9.3		S			4		2					*D. clouds	John Merrifield.
Roche's Point			30.47	773.9	50	10.0		SW			5		8					Cloudy	W. Kennedy.
Saint Ann's Head																			John C. Walker.
Saint Helier, (Jersey)			30.62	777.7	46.4	8.0		SE			3		0					Clear	A. P. Amy.
Sandwick Manse, (Orkneys)			30.07	763.8	44.1	6.7		SSW	20	8.9			0					Blue sky	Rev. C. Clouston, LL. D.
Scarborough																			F. Shaw.
Scutari Cemetery, (Turkey)			29.92	760.0	44.4	6.9		NE			3		10					Drizzling	Sergt. W. H. Lyne.
Sheffield			30.54	775.7	44.2	6.8		SW			1		6			0	0	*D. clouds	W. F. Cooper.
Silloth Rectory			30.37	771.4	46.0	7.8	95	W			6		10			0.11	2.92	*D. clouds	Rev. Francis Redford.
Stonyhurst, Observatory			30.48	774.2	45.0	7.2		SW			2		3					Blue sky	Rev. S. J. Perry.
Stornoway, Lewis C., (Hebr.)			30.03	762.7	42	5.6		WSW			5		8					Showery	John Smith.
Stratfield Turgiss			30.05	778.5	45.9	7.7		NW			1		3					Blue sky	Rev. Charles H. Griffith.
Thurso			30.05	763.3	43	6.1		SSW			3		2					Blue sky	John Trotter.
Truro, Royal Institution			30.57	776.5	49	9.4		S			6		4					*D. clouds	W. Newcombe.
Valencia, Observatory			30.41	772.4	50.1	10.1		SSW	23	10.3			10					Overcast	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man)					46	7.8		SW			7		3			0	0		Henry Mercer.
Cape Good Hope, Obs'y			29.77	756.1	77.9	25.5	48	NW	1	0.4			8						The Staff, for E. J. Stone.
Hobart Town, (Tasmania)			29.63	752.6	68.5	20.3	94	S			1		7k			0	0	Cloudy	Francis Abbott, F.R.A.S.
Leith, Restalrig Park			30.30	769.6	47.8	8.8		W			3		8k			0	0	Cloudy	Andrew Gibb.
Mauritius, Observatory			29.90	759.4	85.4	29.7	54	NNE	11.3	5.1			4	6	SSE	NE	0	0	*D. clouds	C. Meldrum.
Melbourne, Observatory			29.89	759.2	60.0	15.6	72	SE	9	4.0			0				0	0	Very fine	R. L. J. Ellery.
Monach L't-house, (Hebrides)			30.12	765.0	44	6.7		W			7	5	5	W		0.3	7.6		J. Youngclause.
North Unst, (Shetland Is.)			29.95	760.7	42	5.6		W			6	10	10	SW		Blank	Blank		Robert Burnet.

Note.—Generally, the originals do not give the relative humidity, rain-fall, or distinction between upper and lower clouds. The originals give the wind direction to 32 points and weather by the Beaufort notation. The originals give the barometer for Aberdeen, Cardington, Galway, Oxford, St. Helier, Sandwick, Scarborough, Stonyhurst, Leith, Monach and North Unst as read off and the cloudiness for Stornoway by the scale 0 to 4. The wind-force is given by the scale 0 to 12 in the official series; 0 to 6 in the sub-series; except in lbs. per square foot for Greenwich and Hobart Town. The rain-fall is measured at Aberdeen at 10 a. m.; Bradford, 9 a. m.; Hobart Town, 7:30 a. m.; Nottingham, 6 p. m.; Mauritius, 9 a. m., local time. The elevation of Dartmoor is 1,400 feet, or 426.7 meters; Davos Platz, 5,105? feet, or 1,556.0? meters; Fort Napier, 2,200 feet, or 670.6 meters. *Detached clouds.

COSTA RICA SERIES.

By authority of the Minister of Foreign Affairs.

Furnished by the coöperation of Senor Federico Maison, Director of the Central Office of Statistics and Meteorology.

San José																			

DANISH SERIES.

Furnished by the co peration of Captain N. Hoffmeyer, Director of the Royal Danish Meteorological Institute at Copenhagen.

Copenhagen			30.51	775.0	34.7	1.5	94	SW			2		10						
Fanöe																			
Godthaab, (Greenland)			28.90	734.1	10.4	-12.0	93	ENE			6		10						
Stykkisholm, (Iceland)			29.32	744.8	26.1	— 3.3	87	S			2		10					Snowing	
Thorshavn, (Faröe)			29.72	754.8	39.6	4.2	85	WSW			6		7					Raining	
Vestervig			30.45	773.3	37.8	3.2	97	SSW			4		2						

Note.—The originals give the wind-force by the scale 0 to 6; occasionally, weather by Vienna symbols; no distinction between the amount of upper and lower clouds.

FRENCH SERIES.

Furnished by the cooperation of His Excellency, U. J. Le Verrier, Director of the Paris Observatory, and the respective Observers.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters	Weather	Observer.
Alençon	.....	.....	30.66	778.8	48.2	9	85	NE	.....	.....	2	.....	2s	.....	NE	0	0	Slightly cl'dy	Normal School.
Amiens	.....	.....	30.68	779.2	37.4	3.0	86	NW	.....	.....	3	.....	0	.....	.....	0.276	7.0	Clear	Normal School.
Avignon	.....	.....	30.28	769.0	48.0	8.9	63	N	.....	.....	8	.....	0	.....	.....	0	0	Clear	Normal School.
Bar-sur-Seine	.....	.....	30.09	779.4	36.3	2.4	93	NE	.....	.....	2	.....	10	.....	NE	0.043	1.1	Covered	C. Saillard.
Beaumette, (near Angers)	.....	.....	30.61	777.4	36.7	2.6	96	E	8.7	3.9	.....	.....	.....	.....	SSW	0	0	.....	Beaumette Observ'tory.
Beauvais	.....	.....	30.72	780.3	39.0	3.9	91	S	.....	.....	1	.....	10	.....	.....	0.169	4.30	Covered	Normal School.
Besançon	.....	.....	30.62	777.8	41.9	5.5	79	NE	.....	.....	3	.....	5	.....	NE	0.165	4.2	Cloudy	Normal School.
Bourg en Bresse	.....	.....	30.58	776.6	43.0	6.1	75	N	.....	.....	4	.....	2kn	.....	S	0.024	0.6	Slightly cl'dy	Normal School.
Bourges	.....	.....	30.60	777.3	42.4	5.8	79	NNE	.....	.....	2	.....	2	.....	NNE	0	0	Slightly cl'dy	Normal School.
Brest	.....	.....	30.50	774.7	49.1	9.5	69	SSE	.....	.....	3	1c	.....	SSE	.....	0.059	1.50	.....	Naval Observatory.
Carcassonne	.....	.....	30.37	771.4	50.4	10.2	77	W	.....	.....	.....	.....	0	.....	.....	0	0	Clear	Normal School.
Caen	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Chartres	.....	.....	30.63	778.0	47.8	8.8	82	NE	.....	.....	1	.....	1	.....	SE	0.04	1.	.....	Normal School.
Châlons-sur-Marne	.....	.....	30.68	779.3	43.2	6.2	67	NE	.....	.....	3	.....	5k'	.....	SE	0.028	0.7	Cloudy	Normal School.
Clermont	.....	.....	30.58	776.6	40.6	4.8	69	NW	.....	.....	2	.....	5	.....	NE	0	0	Cloudy	Puy de Dome Obs'y.
Commercy	.....	.....	30.66	778.7	39.2	4	86	NW	.....	.....	1	.....	2kn	.....	NE	0	0	Slightly cl'dy	Normal School.
Commune de Gréasque*	.....	.....	30.22	767.5	53.4	11.9	56	NW	.....	.....	1	.....	2	.....	SW	0	0	.....	M. Kina.
Grenoble	.....	.....	30.37	771.4	44.2	6.8	74	NNW	.....	.....	4	.....	5ks	.....	SW	0	0	Cloudy	Normal School.
La Roche-sur-Yon	.....	.....	30.68	776.8	43.0	6.1	77	NE	.....	.....	1	.....	5	.....	S	0	0	Cloudy	Normal School.
Le Mans	.....	.....	30.66	778.6	43.5	6.4	77	E	.....	.....	4	.....	0	.....	.....	0	0	Clear	Normal School.
Lons-Le-Saulnier	.....	.....	30.54	775.8	39.7	4.3	70	NE	.....	.....	6	.....	5	.....	SW	0.087	2.20	Cloudy	Normal School.
Lorient	.....	.....	30.62	777.8	45.7	7.6	61	SE	.....	.....	4	.....	0	.....	.....	Inap.	Inap.	Clear	Naval Observatory.
Mâcon	.....	.....	30.60	777.3	42.8	6	79	N	.....	.....	6	.....	5	.....	N	0	0	Cloudy	Normal School.
Metz	.....	.....	30.70	779.8	39.6	4.2	75	N	.....	.....	2	.....	0	.....	.....	0.079	2.0	Clear	M. Schuster.
Mirecourt	.....	.....	30.66	778.8	40.6	4.8	62	NNW	.....	.....	2	.....	2	.....	SSE	0	0	Slightly cl'dy	Normal School.
Nismes	.....	.....	30.28	769.1	52.5	11.4	73	NW	.....	.....	8	.....	0	.....	.....	0	0	Clear	Normal School.
Orleans	.....	.....	30.67	778.9	37.8	3.2	90	S	.....	.....	1	.....	5	.....	NE	0	0	Cloudy	Normal School.
Paris, Observatory	.....	.....	30.70	779.7	36.5	2.5	.....	NE	.....	.....	1	.....	10	.....	.....	0.072	1.84	Foggy	National Observatory.
Parthenay	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Privas	.....	.....	30.41	772.4	47.8	8.8	.....	NE	.....	.....	2	.....	2	.....	NE	0	0	Slightly cl'dy	Normal School.
Rochefort, Observatory	.....	.....	30.54	775.8	58.1	14.5	21	E	.....	.....	3	.....	0	.....	.....	0	0	Clear	Naval Observatory.
Rouen	.....	.....	30.69	779.5	39.2	4.0	93	ENE	.....	.....	2	.....	10	.....	.....	0.091	2.3	Covered	Normal School.
Saint Lo	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Tartes	29.30	744.2	30.39	771.8	59.9	15.5	95	E	.....	.....	2	.....	5	.....	E	0	0	Cloudy	Normal School.
Villefranche	.....	.....	30.48	774.2	46.4	8	93	N	.....	.....	6	.....	2	.....	N	0	0	Slightly cl'dy	Normal School.
SUB-SERIES.																			
Fort de France, Martinique	.....	.....	29.95	760.7	75.7	24.3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	L'Abbé Marchésl.
Marseilles	.....	.....	30.17	766.2	56.5	13.6	48	NW	.....	.....	2	.....	0	.....	.....	0	0	Clear	Marseilles Observatory.
Mont-Louis	25.12	638.1	30.44	773.1	43.5	6.4	12	NNW	20.5	9.17	.....	.....	6	.....	W	0	0	.....	—, Falguère.
Montsouris, Paris	.....	.....	30.67	779.1	35.2	1.8	96	NNE	.....	.....	1	.....	5	.....	.....	0.035	0.9	.....	Montsouris Observatory
Perpignan	.....	.....	30.37	771.4	57.7	14.3	40	N	18.6	8.33	.....	.....	1	.....	NW	0	0	.....	Dr. Fines.
Pic du Midi, (Summit,) H. P.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. Baylac.
Pic du Midi, (Plantade,) H. P.	22.71	576.7	.....	.....	34.7	1.5	.....	NNW	.....	.....	4	.....	7	.....	.....	0	0	Fair	General de Nansouty.
Saint Maur, (near Paris)	.....	.....	30.68	779.2	38.7	3.7	90	NNE	.....	.....	1	.....	1	.....	.....	0.067	1.7	.....	E. Renou.
Toulouse	.....	.....	30.50	774.7	47.7	8.7	82	NNW	.....	.....	1	.....	1	.....	.....	0	0	Foggy	Toulouse Observatory.
Tours	.....	.....	30.62	777.8	40.6	4.8	84	ESE	.....	.....	4	.....	1	.....	E	0.051	1.3	.....	C. Marquet.
Versailles, (near Paris)	.....	.....	30.68	779.2	36.7	2.6	100	N	.....	.....	1	.....	10	.....	.....	0.043	1.10	Dense fog	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai)	.....	.....	30.36	771.2	41.0	5.0	74	ENE	10.2	4.58	.....	.....	10	.....	.....	0	0	.....	Marc Dechevrens, S. J.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—Generally, the originals give the wind-force by the scale 0 to 7; no distinction between upper and lower clouds, and, in the official series, the amount by the scale 0 to 4; the rain-fall as measured at 7, 8 or 9 a. m., local time; at Clermont, 9 a. m. of the following day; the weather in general terms as published. The elevation of Clermont is 388 meters, or 1,272.9 feet; Commune de Gréasque, 322 meters, or 1,056.4 feet; Tarbes, 308 meters, or 1,010 feet; Mont-Louis, 1,586.40 meters, or 5,204.8 feet; Pic du Midi, (Summit,) 2,877 meters, or 9,439.1 feet; Pic du Midi, (Plantade,) 2,366 meters, or 7,762.6 feet. In correcting the Mont-Louis barometric observations for altitude, the constant 135. millimeters has been added. *Bouches-du-Rhône

GERMAN SERIES.

Furnished by the coöperation of Professor Dr. G. Neumayer, Director of the German Naval Observatory, Hamburg.

Bamberg	.....	.....	30.40	772.1	39.4	4.1	74	NW	.....	.....	7	.....	10	NW	.....	0.157	4.0	.....	Prof. T. Heh.
Berlin	.....	.....	30.54	775.7	39.2	4.0	88	N	.....	.....	5	.....	10	.....	.....	0.673	17.1	.....	Prof. Arndt.
Breslau	.....	.....	30.38	771.7	32.7	0.4	100	WSW	.....	.....	3	.....	10	.....	.....	0.445	11.3	Rain & snow	Royal University Obs'y
Carlsruhe	.....	.....	30.58	776.8	42.4	5.8	72	NNW	.....	.....	4	.....	9	.....	.....	0.268	6.8	.....	A. Senz.
Cassel	.....	.....	30.63	778.0	39.2	4.0	81	N	.....	.....	5	.....	5	N	.....	0.480	12.2	Raining	Dr. H. Möhl.
Crefeld	.....	.....	30.65	778.4	41.0	5.0	92	N	.....	.....	1	.....	7	.....	.....	0.63	16.	.....	Director Lose.
Linden	.....	.....	30.69	779.4	40.8	4.9	96	W	.....	.....	1	.....	0	.....	.....	0	0	.....	Prof. Prestel.
Frankfort on the Main	.....	.....	30.61	777.6	43.9	6.6	65	NNE	.....	.....	4	.....	8	.....	.....	0.185	4.7	.....	Physical Society.
Friedrichshafen	29.06	738.0	30.56	776.3	38.5	3.6	92	NNW	.....	.....	2	.....	10	.....	.....	0.193	4.9	Raining	M. Wilhelm.
Hamburg	.....	.....	30.61	777.5	35.6	2.0	100	Calm	.....	.....	0	.....	7k,fg	.....	.....	0.071	1.8	Foggy	Captain F. Hegemann.
Kiel	.....	.....	30.56	776.3	35.4	1.9	93	WSW	.....	.....	2	.....	0	.....	.....	0	0	.....	Prof. G. Karsten.
Königsberg, (Prussia)	.....	.....	30.44	773.1	28.4	— 2.0	83	W	.....	.....	2	.....	10	.....	.....	0.339	8.6	Snowing	Prof. E. Luther.
Köslin	.....	.....	30.50	774.6	35.4	1.9	.....	Calm	.....	.....	0	.....	10	.....	.....	0.329	8.2	.....	H. Müller.
Leipsic	.....	.....	30.53	775.5	36.3	2.4	100	N	.....	.....	1	.....	10	NNE	.....	0.528	13.4	Raining	Prof. Bruhns.
Memel	.....	.....	30.43	772.9	27.3	— 2.6	94	S	.....	.....	2	.....	10ks	.....	.....	0.224	5.7	Light fog	Reinbrecht & Skalweit.
Münster	.....	.....	30.62	777.8	41.7	5.4	88	NW	.....	.....	1	.....	6	.....	.....	0.469	11.9	Foggy	Prof. E. Heis.
Neuahrwasser	.....	.....	30.44	773.2	35.4	1.9	95	NNE	.....	.....	1	.....	10	.....	.....	0.201	5.1	Foggy	A Lothe.
Posen	.....	.....	30.32	770.0	32.5	0.3	100	N	.....	.....	5	.....	10	.....	.....	0.059	1.5	Snowing	Dr. Magener.
Strassburg, (in Alsace)	.....	.....	30.61	777.5	43.0	6.1	67	NE	.....	.....	2	.....	10	NE	.....	0.201	5.1	.....	Dr. Schur.
Stuttgart	.....	.....	30.55	775.9	40.1	4.5	79	N	.....	.....	3	.....	10	.....	.....	0.067	1.7	Raining	Prof. Schoder.
Thorn	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Dr. Hasenbalg.
Treves, (Trier)	.....	.....	30.59	776.9	48.0	6.1	56	NE	.....	.....	1	.....	1	.....	.....	0	0	.....	Prof. Flesch.
Weissenburg, (Bavaria)	28.89	733.9	30.48	774.3	34.5	1.4	93	NW	.....	.....	2	.....	10	.....	.....	0.142	3.6	Raining	Dr. von Bebber.
Wustrow, Naval School	.....	.....	30.59	776.9	32.2	0.1	100	NNE	.....	.....	3	.....	10	.....	.....	0	0	Foggy	E. F. Schütz.
GERMAN NAVAL SERIES.																			
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—The elevation of Friedrichshafen is 413.4 meters, or 1,356.3 feet; Weissenburg, 431 meters, or 1,414.0 ft. In the originals the distinction between the amount of upper and lower clouds is not made. It is not always certain that the remarks in the weather column refer to the moment of observation.

GREEK SERIES.

Furnished by the cooperation of Professor Dr. J. F. Julius Schmidt, Director of the Royal Observatory at Athens.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Athens			29.90	759.4	46 9	8.3		N										Half clear...	

Note.—The originals give the barometer corrected, but not reduced to sea-level; occasionally the kind of clouds; the weather as published. They omit the humidity, wind-force, amount of cloudiness and rain-fall.

ITALIAN SERIES.

Furnished by the cooperation of His Excellency the Minister of Agriculture, Industry and Commerce, and the respective Observers.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Udine			30.31	769.8	40.1	4.5	77	E	4.3	1.9		10				0	0		Prof. Giovanni Clodig.
Stelvio	22.24	564.8			21.2	— 6.0		N			2	10				0	0	Foggy	Signora Ernesta Manfredi.
Valdobbia	22 26	565.4			23.4	— 4.8	70	NW			2	6		NW		0	0		Ab. Dom. Mongini.
Padua			30.32	770.0	40.1	4.5	73	NE	8.1	3.6		10				0.012	0.3	Light rain...	Prof. Dott. Lor nzoni.
Vicenza			30.33	770.4	41.5	5.3	69	E	6.3	2.8		10				0.028	0.7	Light rain..	Conte Alm. Da Schio.
Verona			30.28	769.1	43.5	6.4	82	NE			6	10				0.425	10.8	Raining	Dott. B. Bertoncelli.
Bergamo	28.92	734.6	30.29	769.4	42.8	6.0	69	S			1	7				0	0		Prof Trionfini Carlo.
Domodossola			30.31	769.8	36.1	2.3	57	S			6	3				0	0		Prof. Giuseppe Calza.
Milan			30.29	769.3	43.7	6.5	78	E			1	8		ENE		0	0		Ab. Gio. Capelli
Pavia			30.32	770.0	38.7	3.7	85	SE			1	8		SW		0	0		Prof. Gio. Cantoni.
Moncalieri			30.33	770.4	41.7	5.4	75	ESE	1.3	0.6		1				0	0		Prof. P. F. Denza.
Mondovi	28.33	719.6	30.32	770.1	39.6	4.2	65	NNW			4	5		NW		0	0		Prof. D. C. Bruno.
Porto Maurizio			30.20	767.0	55.8	13.2	58	SE			2	1				0	0		Prof. L. Vassallo.
Genoa			30.20	767.0	49.6	9.8	45	NE	9.8	4.4		0				0	0		Prof. G. M. Garibaldi.
Piacenza			30.32	770.2	39.4	4.1	82	E	4.9	2.2		10		W		0	0		Dott. G. Manzi.
Parma			30.34	770.6	42.3	5.7	88	E			2	9				0	0		Prof. P. Pigorini.
Florence			30.19	766.7	48.7	9.3	49	NE			4	10				0	0		Cav. F. Meucci.
Leghorn			30.19	766.7	50.7	10.4	58	ENE	4.5	1.9		4		SE		0	0		Prof. P. Monte.
Siena	28.93	734.9	30.19	766.7	48.6	9.2	46	E	0.7	0.3		9		NW		0	0		Prof. L. Toscani.
Urbino	28.07	728.1	30.30	769.6	39.9	4.4	74	ENE			2	10				0	0		Prof. P. Serpieri.
Pesaro			30.26	768.5	45.5	7.5	77	SE			1	10		N		0	0		Prof. Luigi Guidi.
Ancona			30.25	768.4	46.4	8.0	53	SE			2	6		SW		0	0		Prof. F. De— Bosis.
Grosseto			30.16	766.0	52.3	11.3	59	NNE			4	5		SE		0	0		Avv. P. Ponticelli.
Rome			30.11	764.9	53.1	11.7	50	NNE	12.5	5.6		8				0	0		Prof's. P. Secchi & L. Respighi.
Naples, O. U.			30.12	765.0	50.7	10.4	38	E			4	7		NNE		0	0		Prof. L. Palmieri.
Lecce			30.04	763.0	47.3	8.5	50	NE	21.0	9.4		3				0	0		Prof. C. De—Giorgi.
Cosenza			30.11	764.7	42.8	6.0	70	NE	24.2	10.8		9				0	0		Prof. F. D. Conti.
Cagliari																			Prof. A. Pacinotti.
Ittiposto, (Sicily)			30.01	762.2	52.2	11.2	50	N			2	6		S		0	0		Prof. F. Cattero.
Palermo			30.04	763.0	54.0	12.2	59	NW	14.5	6.4		10				0.315	8.0	Raining	Prof. G. Cacciatore.
Caltanissetta	28.02	711.7	30.03	762.7	46.0	7.8	83	N			4	10		SE		0.024	0.6	Light rain...	Prof. A. Pagani.
Siracusa			29.96	761.0	54.5	12.5	53	NE			4	10		NNW		0	0		Prof. V. Giuliano.
Sub-Series.																			
Naples, S. R.			30.17	766.2	46.0	7.8	48	NE	4.9	2.2		4		NE		0	0		Prof. F. Brioschi

Note.—The originals give the wind-force by the scale 0 to 4, or the velocity in kilometers per hour; generally, no distinction between upper and lower clouds; occasionally the weather by the Vienna symbols. The elevation of Stelvio is 2,543.0 meters, or 8,342.9 feet; Valdobbia, 2,548.0 meters or 8,359.3 feet; Bergamo, 379.6 meters, or 1,245.3 feet; Mondovi, 556 meters, or 1,824.2 feet; Siena, 348.5 meters, or 1,143.3 feet; Urbino, 451 meters, or 1,479.7 feet; Caltanissetta, 570.3 meters, or 1,871.0 feet.

JAPANESE SERIES.

Furnished by the cooperation of the Imperial University of Tokei, Japan.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Tokei			30.06	763.5	36	2.2		NW	9	4.0			0			0.03	0.8		Prof. P. V. Veeder.

Note.—The originals give the amount of cloudiness by the scale 0 to 4 without distinguishing between upper and lower clouds. The rain-fall is measured at 7 a. m., local time.

MEXICAN SERIES.

By authority of the Secretary of Public Works.

Furnished by the cooperation of Senor Mariano Barcena, Director of the Central Meteorological Observatory in the City of Mexico.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Mexico																			Mariano Barcena.
[illegible]																			Vicente Reyes.
																			Miguel Perez.
																			(Engineers in charge.)

Note.—The elevation of Mexico is 2,290 meters, or 7,512.9 feet. The rain-fall is measured at 6 a. m., local time.

NETHERLANDS' SERIES.

Furnished by the cooperation of Professor Buys Ballot, Director of the Royal Meteorological Institute of the Netherlands at Utrecht.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Flushing			30.71	779.9	44.6	7.0		WNW			2					0.209	7.6		
Groningen			30.58	776.6	43.0	6.1		NW								0	0		
Heider			30.60	777.3	44.4	6.9		WSW			2					0	0		
Utrecht			30.32	777.7	43.0	6.1	84	NW			2		2			0	0	Light cloudy	

Note.—The originals give the wind-pressure in kilograms per square meter; for Utrecht, they give the weather as published, from which the amount of cloudiness is taken by the scale 0 to 4, without distinguishing between upper and lower clouds. It is assumed that the barometer readings have been reduced to sea-level.

NORWEGIAN SERIES.

Furnished by the cooperation of Professor H. Mohn, Director of the Royal Norwegian Meteorological Institute at Christiania.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Bergen			30.20	767.0	41.0	5.0	94	S	21.0	9.4			10			0.591	15.0		
Brönö			29.82	757.5	40.6	4.8	59	SSW	17.9	8			10			0.520	13.2		
Christiania			30.28	769.1	26.6	— 3.0	85	ESE	0	0			10			0	0	Light fog	
Tromsö			29.50	749.3	35.6	2.0	85						10			0.236	6.0	Rain & snow	

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols. The cloudiness and weather at Bergen refer to 2h., p. m., local time, instead of 1h., [illegible]

PORTUGUESE SERIES.

Furnished by the coöperation of J. C. de Brito Capello, Director of the Meteorological Observatory of the Infante Don Luiz at Lisbon.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Angra, (Azores)			29.81	757.2	52.7	11.5	69	W	31.8	14.2			8			0.339	8.6		
Campo Major			30.37	771.4	52.7	11.5	71	ESE	3.0	1.33			6	ESE		0	0		Dr. A. M. R. dos Santos.
Funchal, (Madeira)			30.23	767.7	67.5	19.7	69	SW	3.6	1.61			2			0	0		Capt. D. A. de Cunha.
Lisbon			30.37	771.4	50.4	10.2	90	NE	7.4	3.3			9	SW		0	0		The Observatory.
Ponta Delgada, (Azores)			29.97	761.2	57.2	14.0	55	WSW	15.0	6.7			4			0.189	4.8		

Note.—The originals give the wind-velocity in kilometers per hour; occasionally, the weather by the Vienna symbols; the amount of cloudiness without distinguishing between upper and lower clouds; the barometer corrected but not reduced to sea-level. The rain-fall at Libson is measured at noon, instead of 0 h. 6 m., p. m.

RUSSIAN SERIES.

Furnished by the coöperation of Professor H. Wild, Director of the Imperial Central Physical Observatory of Russia, at St. Petersburg.

Warsaw			30.44	773.2	24.3	— 4.3	86	ESE	7	3			10					Solar corona	Astronomical Obs.
Wilna			30.51	775.0	23.9	— 4.5	87	S	2	1			10						Astronomical Obs.
Dorpat			30.36	771.2	24.3	— 4.3	97	SW	9	4			10						Physical Cabinet.
St. Petersburg			30.26	768.6	22.5	— 5.3	93	SW	11	5			10					Light snow.	Central Physical Obs.
Kuopio			30.08	762.6	27.7	— 2.4		W	7	3			10						Ch. Forsten.
Kieff			30.52	775.3	11 8	—11.2	85	ENE	4	2			3						Physical Cabinet.
Nikolaiev			30.37	771.4	20.3	— 6.5	79	NE	34	15			10						Kurdakof.
Kertch			30.19	766.8	33.4	0.8	87	NE	13	6			10						Lagorio.
Moscow			30.65	778.6	12.9	—10.6	73	SSW	4	2			5						Meteorological Obs.
Lugan			30.45	773.4	12.6	—10.8	66	ENE	13	6			0						Meteorological Obs.
Archangel			29.92	759.9	19.0	— 7.2	95	SSW	27	12			10						Ogorodnikof.
Tiflis	28.83	732.2	30.30	769.7	39.2	4.0	88	Calm	0	0			10					Raining	Physical Observatory.
Astrakhan			30.52	775.3	21.9	— 5.6	70	ENE	9	4			7						Sebastianof.
Kasan			30.77	781.5	— 5.3	—20.7	86	S	4	2			0						Physical Cabinet.
Orenburg			30.59	777.0	— 5.6	—20.9	65	E	13	6			8						Tschernischei.
Ekaterinburg	29.82	757.3	30.87	784.0	8.1	—18.3	83	WSW	9	4			10						Meteorogical Obs.
Nukuss			30.51	775.0	21.2	— 6.0	85	NE	11	5			1						
Kasaly																			Bobrof.
Tashkend																			Michelson.
Barnaul																			Meteorological Obs.
Yeniseisk			30.44	773.2	— 7.6	—22.0	85	Calm	0	0			4						Marks.
Irkutsk			30.40	772.2	—43.8	—42.1	74	Calm	0	0			0						Usolzef.
Peking, (China)																			Physical Observatory.
Nertchinsk			30.37	771.5	24.8	— 4.0	80	Calm	0	0			4						Meteorological Obs.
Vladivostock	27.99	710.9	30.43	773.0	—26.9	—32.7	93	Calm	0	0			0						
Nikolaievsk, on the Amoor			30.37	771.3	0.5	—12.5	78	NW	4	2			0						
					— 1.3	—18.5		WNW	7	4			10						

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols; they omit the rain-fall. The elevation of Tiflis is 409 meters, or 1,341.8 feet; Ekaterinburg, 306.4? m., or 1,005.2? ft.; Tashkend, 494.2? m., or 1,621.3? ft.; Irkutsk, 392 m., or 1,286 ft.; Nertchinsk, 592.0? m., or 1,942.2? ft.

SPANISH SERIES.

Furnished by the coöperation of Antonio Aguilar, Director of the Royal Observatory at Madrid, and of Don Cecilio Pujazon, Captain R. N. Director of the Naval Observatory at San Fernando.

Madrid			30.43	772.8	47.5	8.6	74	E	1.5	0.67		1	2			0	0	Light clouds	Royal Observatory.
San Fernando			30.38	771.7	63.0	17.2	65	ESE	11.9	5.3		1	1	NW	W				Naval Observatory.

Note.—The originals give the weather in general terms, as published; rain-fall for San Fernando from preceding to following midnight; wind-velocity for Madrid in kilometers per hour.

SWEDISH SERIES.

Furnished by the coöperation of Professor R. Rubenson, Director of the Royal Swedish Meteorological Institute, at Stockholm, and of Dr. H. H. Hildebrandsson, Chief of the Meteorological Division of the Upsala Observatory.

Haparanda			29.87	758.6	23.7	— 4.6	100	SW			2		0			0.35	9.		
Umea			30.08	764.1	26.4	— 3.1	98	W			2		2			0.051	1.3		
Hernosand			30.14	765.5	30.9	— 0.6	92	SW			2		0?			0.047	1.2	Snowing?	
Stockholm			30.30	769.6	29.1	— 1.6	96	Calm			0		0			0	0		
Wisby			30.39	771.8	33.1	0.6	89	WNW			4		0			0.055	1 4		
Sub-Series.																			
Upsala			30.28	769.0	23.9	— 4.5	92	SW	7.6	3.4			0			0.011	0.27		Dr. Hildebrandsson.

Note.—The originals give the wind-force by the scale 0 to 6, and Upsala also velocity in meters per second; occasionally, the weather by the Vienna symbols, or in general terms; no distinction between the amount of upper and lower clouds. The rain- all is measured at 8 a. m., local time.

SWISS SERIES.

Furnished by the coöperation of Professor R. Wolf, Director of the Observatory at Zurich, and of Professor E. Plantamour, Director of the Observatory at Geneva.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Geneva	29.00	736.5	30.46	773.6	42.6	5.9	63	NNE	.....	.....	8	.....	2	.....	.....	0	0	Clear	The Observatory.
Zurich	28.86	733.0	30.55	776.0	38.3	3.5	88	NW	.....	.....	1	.....	10	.....	.....	0.260	6.6	Covered	The Observatory.

Note.—For Geneva the corresponding departures from the normal values are: Barometer, +9.0 mm; Thermometer, +4.2 cent.; Relative Humidity, —15 per cent.

Note.—The rain-fall is measured at Zurich at 7 a. m. on the following day. The originals give the barometer corrected but not reduced to sea-level; the wind-force by the scale 0 to 4 for Zurich; the amount of cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The elevation of Geneva is 408 meters, or 1,339 feet, and that of Zurich 470 meters, or 1,542 feet.

TURKISH SERIES.

Furnished by the coöperation of A. Coumbary, Effendi, Director of the Central Observatory at Constantinople, and of Professor C. V. A. Van Dyck, Superintendent of the Lee Observatory at Beirut.

Constantinople	.....	.....	29.97	761.1	44.2	6.8	88	ENE	18	8.0	.....	.....	10	.....	NE	0.472	12.0	.....	
Fao, (Persian Gulf)	.....	.....	30.24	768.0	66.2	19.0	.....	SW	.....	.....	4	.....	10	.....	.....	.....	.....	.....	
Salonica	.....	.....	30.10	764.4	39.6	4.2	.....	N	.....	.....	2	.....	10	.....	.....	.....	.....	Snowing	
Valona	.....	.....	29.87	758.6	47.5	8.6	.....	NE	.....	.....	2	.....	0	.....	.....	.....	.....	.....	
Varna	.....	.....	30.04	763.0	24.8	— 4.0	.....	N	.....	.....	6	.....	10	.....	.....	Blank	Blank	.....	
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y	.....	.....	29.93	760.2	64.0	17.8	56	SW	.....	.....	4	.....	3ks	.....	SW	0	0	*D. clouds	Prof. C. V. A. Van Dyck.

Note.—The originals give the wind-force by the scale 0 to 7, (except Beirut, by the scale 0 to 12, and Constantinople velocity in meters per second;) the weather in general terms as published; no distinction between upper and lower clouds, and, except Constantinople and Beirut, the amount by the scale 0 to 4. It is assumed that the barometer is reduced to sea-level. * Detached clouds.

CANADIAN SERIES.

Furnished by the coöperation of Professor G. T. Kingston, Director of the Magnetic Observatory at Toronto, and Superintendent of the Meteorological Office of the Dominion of Canada, and the respective Observers. Those marked with a star (*) are also telegraphed daily to the office of the Chief Signal Officer, U. S. Army.

Bathurst, N. B	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Hon. J. Ferguson.
Brockville, Ontario	.....	.....	30.10	764.5	11	—11.7	.....	Calm	0	0	.....	.....	10s	.....	W	0.05	1.3	Cloudy	W. R. Bigg.
*Chatham, N. B	.....	.....	29.93	760.2	3	—16.1	86	W	8	3.6	.....	2ck	0	W	.....	0.12	3.0	Fair	G. A. Blair.
Charlottetown, P. E. Island	.....	.....	29.91	759.7	14	—10.0	82	W	13	5.8	.....	0	0	.....	.....	0.12	3.0	Fair	G. A. Blair.
Cornwall, Ontario	.....	.....	30.10	764.5	7.0	—13.9	93	W	.....	.....	1	.....	10s	.....	.....	0.020	0.51	Clear	H. J. Cundall, C. E.
Dalhousie, N. B	.....	.....	.....	.....	.....	.....	.....	W	.....	.....	1	.....	.....	.....	.....	0.01	0.3	Dull	James Smith, M. A.
Esquimault, B. C	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.30	7.6	Clear	H. A. Johnson.
Fredericton, N. B	.....	.....	30.06	763.5	7.1	—13.8	52	NW	7	3.1	.....	0	0	.....	.....	.....	.....	.....	W. H. Bevis.
*Fort Garry, Manitoba	.....	.....	29.77	756.1	— 4	—20.0	96	W	6	2.7	.....	Haze	Haze	W	W	0.065	1.65	Clear	Prof. Harrison.
Goderich, Ontario	.....	.....	30.19	766.8	4.7	—15.2	87	SW	.....	.....	2	9k	0	W	.....	0	0	Hazy	James Stewart.
Granton, Ontario	28.92	734.6	30.16	766.1	— 2.2	—19.0	.....	SW	.....	.....	1	2cs	0	NE	.....	0	0	Cloudy	H. J. Strang, M. A.
*Halifax, N. S	.....	.....	29.91	759.7	22	— 5.6	79	NW	20	8.9	.....	2c	2ks	W	W	0	0	Clear	James Grant.
Hamilton, Ontario	.....	.....	30.21	767.3	4.2	—15.4	87	SW	.....	.....	2	2cs	0	W	.....	0.190	4.83	Fair	F. Allison, M. A.
Heart's Content, N. F	.....	.....	29.83	757.7	36	1.7	70	W	.....	.....	4	2k	0	.....	.....	Inap.	Inap.	Clear	G. Dickson.
*Kingston, Ontario	.....	.....	30.17	766.3	15	— 9.4	82	SW	2	0.9	.....	.....	10s	.....	.....	0.20	5.1	Fine	E. Weedon.
*Montreal, Quebec	.....	.....	30.10	764.5	7	—13.9	77	SE	6	2.7	.....	Haze	5ks	.....	.....	Inap.	Inap.	Cloudy	S. Woods, M. A.
*Ottawa, Ontario	.....	.....	30.03	762.7	7	—13.9	84	W	2	0.9	.....	5k	2ks	S	E	0.15	3.8	Cloudy	C. H. McLeod, C. E.
*Parry Sound, Ontario	.....	.....	29.97	761.2	9	—12.8	89	S	9	4.0	.....	.....	10n	.....	S	0.01	0.3	Cloudy	J. B. Haney.
Port Dover, Ontario	.....	.....	30.18	766.6	6	—14.4	78	SW	11	4.9	.....	10k	0	SW	.....	0.15	3.8	Light snow	Rev. R. Mosley.
Port Hastings, N. S	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Inap.	Inap.	Fair	H. Morgan.
Port Stanley, Ontario	.....	.....	30.20	767.1	2	—16.7	89	W	14	6.3	.....	2k	0	W	.....	.....	.....	.....	Peter Grant.
*Quebec, Quebec	.....	.....	30.06	763.5	0	—17.8	70	W	1	0.4	.....	0	0	.....	.....	0	0	Clear	M. Payne.
*Rockliffe, Ontario	.....	.....	30.03	762.7	— 4	—20.0	93	SE	2	0.9	.....	.....	10s	.....	NW	0.20	5.1	Clear	Capt. Ashe, R. N.
St. John, N. B	.....	.....	30.08	764.0	15	— 9.4	82	NW	10	4.5	.....	0	0	.....	.....	Inap.	Inap.	Cloudy	
*Saugeen, Ontario	.....	.....	30.02	762.5	9	—12.8	89	SW	12	5.4	.....	.....	10n	.....	W	0	0	Clear	G. Murdoch, C. E.
Stayner, Ontario	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.05	1.3	Cloudy	K. Stewart.
Stratford, Ontario	28.75	730.2	30.20	767.1	— 3.0	—19.4	90	SW	9	4.0	.....	0	.....	.....	.....	Inap.	Inap.	.....	R. J. Cole.
*Sydney, C. B	.....	.....	29.79	756.7	24	— 4.4	60	W	17	7.6	.....	2k	2ks	W	W	0.10	2.5	Fine	C. J. MacGregor, M. A.
*Toronto, Ontario	.....	.....	30.15	765.8	9	—12.8	80	SW	12	5.4	.....	2cs	8ks	W	SW	0.10	2.5	Clear	T. C. Hill.
Woodstock, Ontario	.....	.....	30.17	766.3	— 0.4	—18.0	94	E	12	5.4	.....	0	1s	.....	.....	0	0	Cloudy	Magnetic Observatory.
Sub-Series.																0	0	Clear	J. Montgomery.
St. Johns, Newfoundland	.....	.....	29.55	750.6	33.0	0.6	89	SW	.....	.....	.....	0	5s	.....	NE	0.50	12.7	Squally	John Delany.

Note.—The originals for Brockville, Charlottetown, Port Dover, Port Stanley, Stayner, St. Johns, N. F. and those telegraphed, give the amount of cloudiness by the scale 0 to 4. The elevation of Granton is 1,015 feet, or 309.4 m.; Stratford, 1,182 feet, or 360.3 m.

UNITED STATES SERIES.

Furnished by the coöperation of Bvt. Brig. Gen. Albert J. Myer, Chief Signal Officer, U. S. Army.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Upper. 0—10.	Clouds. Amount. Low'r. 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain fall or melted snow in the past 24 hours. Inches.	Rain fall or melted snow in the past 24 hours. Millimeters.	Weather	Observer.
Albany, N. Y.	.....	.....	30.16	765.8	15	— 9.4	82	Calm	0	0	.....	0	2s	.....	.....	Inap.	Inap.	Fair	
Alpena, Mich.	.....	.....	30.00	762.0	3	—16.1	73	SW	8	3.6	.....	.....	10s	.....	SW	0.01	0.3	Cloudy	
Atlantic City, N. J.	.....	.....	30.22	767.6	29	— 1.7	67	N	4	1.8	.....	10cs	0	SW	.....	0.16	4.1	Cloudy	
Augusta, Ga.	.....	.....	30.06	763.5	61	16.1	97	Calm	0	0	.....	.....	10s	.....	.....	0.33	8.4	Cloudy	
Baltimore, Md.	.....	.....	30.22	767.6	33	0.6	69	NE	4	1.8	.....	.....	10s	.....	SW	0.17	4.3	Cloudy	
Barnegat, N. J.	.....	.....	30.20	767.1	28	— 2.2	60	N	8	3.6	.....	.....	10s	.....	W	0.10	2.5	Cloudy	
Bismarck, Dakota	28.05	712.5	29.84	757.9	5	—15.0	75	NW	16	7.2	.....	Haze	Haz.	.....	.....	0.01	0.3	Hazy	
Boston, Mass.	.....	.....	30.12	765.0	21.5	— 5.8	79	NW	1	0.4	.....	4cs	1s	W	W	0.01	0.3	Fair	
Breckenridge, Minn.	.....	.....	29.76	755.9	8	—13.3	89	SW	8	3.6	.....	.....	10n	.....	SW	0.01	0.3	Light snow	
Buffalo, N. Y.	.....	.....	30.14	765.5	10	—12.2	79	SW	12	5.4	.....	.....	10n	.....	SW	0.01	0.3	Light snow	
Burlington, Vt.	.....	.....	30.10	764.5	19	— 7.2	69	Calm	0	0	.....	5ck	2s	W	.....	0.01	0.3	Cloudy	
Cairo, Ill.	.....	.....	30.24	768.1	21	— 6.1	85	NE	4	1.8	.....	.....	10s	.....	.....	0	0	Cloudy	
Cape Hatteras, N. C.	.....	.....	30.02	762.5	56	13.3	87	W	6	2.7	.....	.....	10s	.....	W	0	0	Cloudy	
Cape Henry, Va.	.....	.....	30.15	765.8	39	3.9	73	NE	20	8.9	.....	.....	10s	.....	NE	0.82	20.8	Cloudy	
Cape Lookout, N. C.	.....	.....	30.09	764.3	53	11.7	93	NW	3	1.3	.....	2c	5s	NW	.....	0	0	Fair	
Cape May, N. J.	.....	.....	30.21	767.3	30	— 1.1	59	NE	9	4.0	.....	.....	10s	.....	NW	0.12	3.0	Cloudy	
Charleston, S. C.	.....	.....	30.09	764.3	57	13.9	87	S	3	1.3	.....	0	8ks	.....	SW	0	0	Fair	
Cheyenne, Wyoming	23.88	606.5	29.82	757.4	15	— 9.4	83	NW	8	3.6	.....	0	5s	.....	.....	0	0	Fair	
Chicago, Ill.	.....	.....	30.08	764.0	9	—12.8	78	S	16	7.2	.....	0	2s	.....	.....	0	0	Fair	
Cincinnati, Ohio.	.....	.....	30.19	766.8	21	— 6.1	43	E	4	1.8	.....	0	5s	.....	W	0	0	Fair	
Cleveland, Ohio.	.....	.....	30.26	768.6	4	—15.6	74	S	9	4.0	.....	2c	2s	W	SW	0	0	Fair	
Corsicana, Tex.	.....	.....	30.08	764.0	35	1.7	61	N	8	3.6	.....	.....	10s	.....	.....	0.03	0.8	Cloudy	
Davenport, Iowa.	.....	.....	30.08	764.0	11	—11.7	79	SW	10	4.5	.....	1cs	0	.....	.....	0	0	Clear	
Denison, Tex.	.....	.....	30.15	765.8	30	— 1.1	68	NW	4	1.8	.....	.....	10s	.....	.....	0	0	Cloudy	
Denver, Col.	24.09	627.1	29.91	759.7	1	—17.2	72	S	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Detroit, Mich.	.....	.....	30.16	766.1	0	—17.8	69	S	10	4.5	.....	0	0	.....	.....	0	0	Clear	
Dodge City, Kan.	27.49	698.2	30.00	762.0	10	—12.2	77	NW	6	2.7	.....	0	2s	.....	W	0	0	Clear	
Dubuque, Iowa.	.....	.....	30.01	762.2	11	—11.7	79	Calm	0	0	.....	.....	10s	.....	.....	0	0	Cloudy	
Duluth, Minn.	.....	.....	29.79	756.7	— 3	—19.4	83	W	1	0.4	.....	0	2s	.....	.....	0	0	Clear	
Eastport, Me.	.....	.....	30.05	763.3	12	—11.1	61	NW	11	4.9	.....	8c	0	SW	.....	0.11	2.8	Fair	
Erie, Pa.	.....	.....	30.21	767.3	6	—14.4	76	S	12	5.4	.....	5cs	Haze	.....	.....	0.01	0.3	Fair	
Escanaba, Mich.	.....	.....	29.89	759.2	0	—17.8	84	SW	4	1.8	.....	.....	10s	.....	.....	0	0	Cloudy	
Fort Gibson, Indian Ter.	.....	.....	30.16	766.1	28	— 5.0	73	NW	4	1.8	.....	2c	0	W	.....	0	0	Fair	
Ft. St. Michael, Alaska	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Fort Sill, Indian Ter.	28.90	734.0	30.08	764.0	26	— 3.3	48	N	18	8.0	.....	10cs	0	.....	.....	0	0	Cloudy	
Fort Sully, Dakota.	28.17	715.5	29.93	760.2	18	— 7.8	68	W	28	12.5	.....	0	5s	.....	W	Inap.	Inap	Fair	
Florence, Arizona.	28.43	722.1	29.96	761.0	51	10.6	.....	SW	.....	.....	.....	2c	0	NW	.....	0	0	Fair	
Galveston, Tex.	.....	.....	29.97	761.2	52	11.1	100	N	20	11.6	.....	.....	10n	.....	.....	2.63	66.8	Heavy rain	
Grand Haven, Mich.	.....	.....	29.99	761.7	22	— 5.6	86	S	19	8.5	.....	.....	10s	.....	.....	0.03	0.8	Cloudy	
Indianapolis, Ind.	.....	.....	30.20	767.1	15	— 9.4	83	S	4	1.8	.....	Haze	5s	.....	.....	0	0	Fair	
Indianola, Tex.	.....	.....	30.00	762.0	45	7.2	100	N	18	8.0	.....	.....	10n	.....	.....	0.28	7.1	Light rain	
Jacksonville, Fla.	.....	.....	30.11	764.8	61	16.1	94	S	8	3.6	.....	.....	Fog	.....	S	0	0	Foggy	
Keokuk, Iowa.	.....	.....	30.07	763.8	18	— 7.8	68	SW	9	4.0	.....	8c	0	SW	.....	0	0	Fair	
Key West, Fla.	.....	.....	30.10	764.5	75	23.9	85	SE	8	3.6	.....	0	8ks	.....	SE	0	0	Cloudy	
Kittyhawk, N. C.	.....	.....	30.13	765.3	42	5.6	100	NE	20	8.9	.....	.....	10n	.....	.....	0.18	4.6	Light rain	
Knoxville, Tenn.	.....	.....	30.12	765.0	32	0.0	69	NW	7	3.1	.....	.....	10ks	.....	N	0.43	10.9	Cloudy	
La Crosse, Wis.	.....	.....	29.90	759.4	11	—11.7	60	S	12	5.4	.....	0	0	.....	.....	0	0	Clear	
Leavenworth, Kan.	.....	.....	30.13	765.3	17	— 8.3	83	NE	3	1.3	.....	.....	10s	.....	.....	0	0	Cloudy	
Louisville, Ky.	.....	.....	30.21	767.3	23	— 5.6	72	E	4	1.8	.....	10cs	0	.....	.....	0	0	Cloudy	
Lynchburg, Va.	.....	.....	30.12	765.0	43	6.1	45	Calm	0	0	.....	10cs	0	SW	.....	0.14	3.6	Cloudy	
Malone, N. Y.	.....	.....	30.00	762.0	16	— 8.9	83	S	8	3.6	.....	.....	10s	.....	S	0.05	1.3	Cloudy	
Marquette, Mich.	.....	.....	29.85	758.2	1	—17.2	72	SW	16	7.2	.....	.....	10s	.....	.....	0	0	Cloudy	
Memphis, Tenn.	.....	.....	30.19	766.8	28	— 2.2	77	NE	8	3.6	.....	5c	0	SW	.....	0	0	Fair	
Milwaukee, Wis.	.....	.....	29.89	759.2	7	—13.9	78	W	16	7.2	.....	0	0	.....	.....	0	0	Clear	
Mobile Ala.	.....	.....	30.00	762.0	53	13.0	100	N	6	2.7	.....	.....	10n	.....	.....	0.56	14.2	Light rain	
Montgomery, Ala.	.....	.....	30.06	763.5	53.5	11.9	93	NW	6	2.7	.....	.....	10n	.....	NW	1.16	29.5	Light rain	
Morgantown, W. Va.	29.11	739.4	30.25	768.3	20	— 6.7	70	Calm	0	0	.....	10c	0	W	.....	0.16	4.1	Cloudy	
Mt. Washington, N. H.	23.30	591.8	29.66	753.4	—11	—23.9	100	NW	64	28.6	.....	.....	Fog	.....	.....	0	0	Foggy	
Nashville, Tenn.	.....	.....	30.18	766.6	24	— 4.4	74	N	4	1.8	.....	0	5s	.....	S	0	0	Fair	
New Haven, Conn.	.....	.....	30.20	767.1	27	— 2.8	70	NW	5	2.2	.....	2ck	0	NW	.....	0.17	4.3	Clear	
New London, Conn.	.....	.....	30.17	766.3	25	— 3.9	75	W	4	1.8	.....	2ck	5cs	W	W	0.30	7.6	Fair	
New Orleans, La.	.....	.....	29.94	760.5	65	18.9	94	Calm	0	0	.....	.....	10n	.....	SW	0.57	14.5	Light rain	
Newport, R. I.	.....	.....	30.15	765.8	25	— 3.9	60	W	10	4.5	.....	.....	10s	.....	W	0.28	7.1	Cloudy	
New York, N. Y.	.....	.....	30.20	767.1	23	— 5.0	73	NW	3	1.3	.....	.....	10s	.....	SW	0.14	3.6	Cloudy	
Norfolk, Va.	.....	.....	30.16	766.1	41	5.0	83	NE	12	5.4	.....	.....	10n	.....	.....	0.47	11.9	Light rain	
North Platte, Neb.	27.05	687.1	29.77	756.1	20	— 6.7	85	W	20	8.9	.....	0	5ks	.....	W	0	0	Fair	
Omaha, Neb.	28.86	733.0	30.00	762.0	22	— 5.6	72	SW	6	2.7	.....	2c	2s	SW	SW	0	0	Fair	
Oswego, N. Y.	.....	.....	30.15	765.8	18.5	— 7.5	78	SW	15	6.7	.....	0	8ks	.....	W	Inap	Inap.	Fair	
Pembina, Dakota.	.....	.....	29.77	756.1	— 5	—20.6	82	W	2	0.9	.....	0	0	.....	.....	0	0	Clear	
Philadelphia, Pa.	.....	.....	30.23	767.6	26	— 3.3	64	N	12	5.4	.....	8c,cs	0	SW	.....	0.10	2.5	Cloudy	
Pike's Peak, Col.	17.34	440.4	29.55	750.6	— 7	—21.7	78	SW	41	18.3	.....	0	0	.....	.....	Inap.	Inap.	Clear	
Pittsburgh, Pa.	.....	.....	30.25	768.3	13	—10.6	81	W	4	1.8	.....	.....	10s	.....	W	0.02	0.5	Cloudy	
Port Huron, Mich.	.....	.....	30.15	765.8	— 1	—18.3	68	S	8	3.6	.....	0	2s	.....	.....	Inap.	Inap	Clear	
Portland, Me.	.....	.....	30.09	764.3	21	— 6.1	71	W	4	1.8	.....	1cs	Haze	.....	.....	Inap.	Inap.	Clear	
Portland, Oregon	.....	.....	30.10	764.5	32	0.0	68	SE	8	3.6	.....	0	0	.....	.....	0	0	Clear	
Punta Rassa, Fla.	.....	.....	30.11	764.8	68.5	20.3	92	E	8	3.6	.....	0	2ks	.....	.....	0.01	0.3	Fair	
Rochester, N. Y.	.....	.....	30.15	765.8	11	—11.7	70	W	14	6.3	.....	Haze	5s	W	W	Inap.	Inap	Fair	
Salt Lake City, Utah.	25.67	652.0	30.00	762.0	18	— 7.8	84	SE	6	2.7	.....	2c	2s	.....	.....	0	0	Fair	
Sandy Hook, N. J.	.....	.....	30.16	766.1	25	— 3.9	75	N	6	2.7	.....	10cs	0	SW	.....	0.13	3.3	Cloudy	
San Diego, Cal.	.....	.....	30.01	762.2	50	10.0	93	Calm	0	0	.....	0	2s	.....	.....	0	0	Clear	
San Francisco, Cal.	.....	.....	30.02	762.5	50	10.0	64	SE	2	0.9	.....	.....	10n	.....	.....	0.07	1.8	Light rain	
Santa Fé, N. M.	23.08	586.2	29.63	752.3	26	— 3.3	63	NW	12	5.4	.....	0	2s	.....	NW	Inap.	Inap.	Clear	
Savannah, Ga.	.....	.....	30.10	764.5	61	16.1	88	SW	6	2.7	.....	.....	10s	.....	W	0	0	Cloudy	
Shreveport, La.	.....	.....	30.13	765.3	40	4.4	64	NE	6	2.7	.....	.....	10s	.....	.....	0.08	2.0	Cloudy	
Smithville, N. C.	.....	.....	30.07	763.8	55	12.8	87	SW	7	3.1	.....	5c	2ks	SW	SW	0	0	Cloudy	
Springfield, Mass.	.....	.....	30.16	766.1	24	— 4.4	73	Calm	0	0	.....	8ck	2s	SW	W	0.03	0.8	Cloudy	
St. Louis, Mo.	.....	.....	30.21	767.3	22	— 5.6	72	W	7	3.1	.....	.....	10s	.....	.....	Inap.	Inap.	Cloudy	
St. Marks, Fla.	.....	.....	30.09	764.3	61	16.1	97	S	1	0.4	.....	.....	Fog	.....	.....	0	0	Foggy	
St. Paul, Minn.	.....	.....	29.83	757.7	6	—14.4	76	SW	8	3.6	.....	0	0	.....	.....	Inap.	Inap.	Clear	
St. Paul's Island, Alaska.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Thatcher's Island, Mass.	.....	.....	30.15	765.8	22	— 5.6	82	NW	16	7.2	.....	2c	2s	W	NW	0.09	2.3	Fair	
Toledo, Ohio.	.....	.....	30.19	766 8	10	—12.2	69	S	9	4.0	.....	2cs	Haz	SW	S	0	0	Clear	
Tucson, Arizona.	27.57	700.3	30.12	765.0	25	— 3.9	.....	S	.....	.....	.....	2c	0	NW	.....	0	0	Fair	
Tybee Island, Ga.	.....	.....	30.12	765.0	57	13.9	93	SW	6	2.7	.....	2c	2s	S	W	0	0	Fair	
Vicksburg, Miss.	.....	.....	30.11	764.8	41	5.0	82	NE	10	4.5	.....	.....	10s	.....	.....	0.75	19.1	Cloudy	
Virginia City, M. T.	24.11	612.4	29.59	751.6	7.5	—13.6	88	Calm	0	0	.....	.....	10ks	.....	NW	0	0	Cloudy	
Washington, D. C.	.....	.....	30.22	767.6	31	— 0.6	54	NE	6	2.7	.....	1ck	8s	W	SW	0.07	1.8	Cloudy	
Wilmington, N. C.	.....	.....	30.05	763.3	57	13.9	87	S	6	2.7	.....	5c	0	SW	.....	0	0	Fair	

UNITED STATES SERIES.—Continued.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Wood's Holl, Mass.	.....	.....	30.16	766.1	26	+ 3.3	64	NW	6	2.7	.....	.....	10s	.....	NW	0.25	6.3	Cloudy	
Yankton, Dakota	28.62	726 9	29.99	761.7	17	— 8.3	83	SW	9	4.0	.....	.....	10s	.....	.....	0	0	Cloudy	
Yuma, Arizona	.....	.....	30.07	763.8	56	13.3	.....	N	.....	.....	.....	0	0	.....	.....	0	0	Clear	
Sub-Series.																			
Kingston, Jamaica, W. I.	.....	.....	30.22	767.6	75	23.9	76	Calm	0	0	.....	2c	2s	.....	.....	0	0	.....	James Gall.
Navassa, W. I.	.....	.....	.....	.....	78	25.6	.....	E	.....	.....	3	.....	.....	.....	.....	0.10	2.5	Clear	F. M. Everett.
Clifton, Ja., W. I.	27.20	690.9	30.00	762.0	65	18.3	73	E	1.0	0.4	.....	2c	0	E	.....	0	0	Fine, clear	C. Partridge.
Paramaribo, D. Guiana, S.A.	.....	.....	30.03	762.7	82	27.8	83	NE	.....	.....	2	3c	5k	E	.....	0.500	14.22	Fair	C. J. Hering.
Batavia, Dutch Guiana, S.A.	30.07	763.8	.....	.....	79.7	26.5	.....	N	.....	.....	.....	.....	.....	.....	.....	0.285	7.25	Raining	Dr. H. Groot.
Medellin, Colombia, S. A.	25.20	640.1	.....	.....	67.0	19.4	75	S	.....	.....	1	.....	10sn	.....	.....	0	0	Cloudy	Thomas Herran.
York Factory, B. A.	.....	.....	29.72	754.9	—30.5	—34.7	.....	NW	6	2.7	.....	0	0	.....	.....	0	0	Clear	J. Fortescue, W. Wood.
Honolulu, Oahu, H. I.	.....	.....	30.13	765.3	65	18.3	94	N	.....	.....	3	.....	.....	.....	.....	0	0	Very clear	Daniel Smith.
Makawao, Maui, H. I.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	F. L. Clarke.

Note.—The originals give the amount of cloudiness by the scale 0 to 4, except York Factory, Makawao, Medellin and Paramaribo. The elevation of the barometer at Bismarck is 1,677 feet, or 511.1 meters; Cheyenne, 6,057.3 ft., or 1,846.2 m.; Clifton, about 2,892 ft., or 881.7 m.; Denver, 5,136 ft., or 1,565.2 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Florence, 1,550 (?) ft., or 472.5 (?) m.; Makawao, 2,205 ft., or 672.1 m.; Morgantown, 1,027.2 ft., or 313.1 m.; Salt Lake City, 4,362.2 ft., or 1,329.6 m.; Santa Fé, 6,862.2 (?) ft., or 2,091.6 (?) m.; Tucson, 2,513 (?) ft., or 772.1 (?) m.; Virginia City, 5,480 (?) ft., or 1,670.3 (?) m.; Yankton, 1,278 ft., or 389.5 m. The following constants are added in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Denver, 5.22 in.; Makawao, 2.170 feet; the barometric readings need the addition of 0.2 mm. or 0.01 in. for reduction to sea-level. Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fé, 6.54 in.; Tucson, 2.55 in.; Virginia City, 5.48 in. The elevation of Batavia is about

UNITED STATES SERIES.—CONTINUED.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Wood's Holl, Mass.	.....	.....	30.16	766.1	26	— 3.3	64	NW	6	2.7	.....	.....	10s	.....	NW	0.25	6.3	Cloudy.....	
Yankton, Dakota	28.62	726 9	29.99	761.7	17	— 8.3	83	SW	9	4.0	.....	.....	10s	.....	.....	0	0	Cloudy.....	
Yuma, Arizona	.....	.....	30.07	763.8	56	13.3	.....	N	.....	.....	.....	0	0	.....	.....	0	0	Clear.....	
Sub-Series.																			
Kingston, Jamaica, W. I.	.....	.....	30.22	767.6	75	23.9	76	Calm	0	0	.....	2c	2s	.....	.....	0	0	.....	James Gall.
Navassa, W. I.	.....	.....	.....	.....	78	25.6	.....	E	.....	.....	3	.....	.....	.....	.....	0.10	2.5	Clear.....	F. M. Everett.
Clifton, Ja., W. I.	27.20	690.9	30.00	762.0	65	18.3	73	E	1.0	0.4	.....	2c	0	E	.....	0	0	Fine, clear...	C. Partridge.
Paramaribo, D. Guiana, S.A	.....	.....	30.03	762.7	82	27.8	83	NE	.....	.....	2	3c	5k	E	.....	0.560	14.22	Fair.....	C. J. Hering.
Batavia, Dutch Guiana, S.A.	30.07	763.8	.....	.....	79.7	26.5	.....	N	.....	.....	.....	.....	.....	.....	.....	0.285	7.25	Raining.....	Dr. H. Groot.
Medellin, Colombia, S. A...	25.20	640.1	.....	.....	67.0	19.4	75	S	.....	.....	1	.....	10sn	.....	.....	0	0	Cloudy.....	Thomas Herran.
York Factory, B. A.	.....	.....	29.72	754.9	—30.5	—34.7	.....	NW	6	2.7	.....	0	0	.....	.....	0	0	Clear.....	J. Fortescue, W. Wood.
Honolulu, Oahu, H. I.	.....	.....	30.13	765.3	65	18.3	94	N	.....	.....	3	.....	.....	.....	.....	0	0	Very clear...	Daniel Smith.
Makawao, Maui, H. I.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	F. L. Clarke.

NOTE.—The originals give the amount of cloudiness by the scale 0 to 4, except York Factory, Makawao, Medellin and Paramaribo. The elevation of the barometer at Bismarck is 1,677 feet, or 511.1 meters; Cheyenne, 6,057.3 ft., or 1,846.2 m.; Clifton, about 2,892 ft., or 881.7 m.; Denver, 5,136 ft., or 1,565.2 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Florence, 1,550 (?) ft., or 472.5 (?) m.; Makawao, 2,205 ft., or 672.1 m.; Morgantown, 1,027.2 ft., or 313.1 m.; Salt Lake City, 4,362.2 ft., or 1,329.6 m.; Santa Fé, 6,862.2 (?) ft., or 2,091.6 (?) m.; Tucson, 2,513 (?) ft., or 772.1 (?) m.; Virginia City, 5,480 (?) ft., or 1,670.3 (?) m.; Yankton, 1,278 ft., or 389.5 m. The following constants are added in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Denver, 5.22 in.; Makawao, 2.170 feet; the barometric readings need the addition of 0.2 mm. or 0.01 in. for reduction to sea-level.

UNITED STATES MARINE SERIES

REPORTED TO THE OFFICE OF THE CHIEF SIGNAL OFFICER OF THE ARMY.

NAMES OF VESSELS.	True course toward—	Hourly rate in knots.	Barometer reduced to sea-level.		Temperature of the Air.		Relative Humidity.	Wind.				Clouds.				State of Ocean.	Direction of swell from—	Weather.	Observer.
								Direction.	Velocity.		Force.	Amount.		Direction.					
												Up'er	Low'r	Upper.	Lower.				
			Inches.	Millimeters.	Fahrenheit.	Centigrade.	Per cent.	From—	Miles per hour.	Meters per second.	0—10.	0—10.	0—10.	From—	From—				

PACIFIC MAIL S. S. CO. MARINE SERIES.

Furnished by the coöperation of ————, President; Williams, Blanchard & Co., Agents.

OCCIDENTAL AND ORIENTAL S. S. CO. MARINE SERIES.

Furnished by the coöperation of George H. Bradbury, President; T. H. Goodman, Agent.

NORTH GERMAN LLOYD OF BREMEN MARINE SERIES.

Furnished by the coöperation of A. Schumacher & Co., Agents.

Steamer Nürnberg, N. 43°, 26′, W. 45°, 28′	WSW ¾ W		30.16	766.1	52.2	11.2		SSW			7		..8		S	Rough.		Raining	Capt. A. Jaeger.

MARINE SERIES. (Miscellaneous.)

Furnished by the coöperation of Captain James Jorgensen.

Schooner Addie Fuller, N. 33°, 26′, W. 77°, 49′	WNW	3	30.03	762.7	62	16.7	83	SW	10	4.5		2ck	0	W		Swell.	S	Clear	Capt. James Jorgensen.

NOTE.—The schooner Addie Fuller gives the amount of cloudiness by the scale 0 to 4.

COLLATED AT THE OFFICE OF THE CHIEF SIGNAL OFFICER OF THE ARMY, WASHINGTON, D. C.

The records which appear in this Bulletin are copied from the regular exchanges of this office, made in each instance in compliance with an especial request and are published for the uses of the coöperating observers. The barometric readings in the first two columns are reduced to freezing and their respective standards; those in the second two also to mean sea-level. The "weather" is generally published as given.

When the distinction between the upper and lower strata of clouds is not reported, the *kinds* or *types*, viz: cirrus, cumulus, stratus, nimbus, scud, fracto, pallio, haze, fog and smoke, as indicated, respectively, by the letters c, k, s, n, d, f. p, hz., fg. and sm'e, are generally published with the amount in the lower-cloud column. The distinction between the upper and lower strata is carefully made in the United States Series and a portion of the Canadian Series, and the types are indicated by the above letters or their combinations in the proper column.

Albert J. Myer

Brig. Gen. (Bvt. Assg'd.) Chief Signal Officer, U. S. A

BULLETIN

OF

INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON JANUARY 22, 1877.

7:35 A. M. WASHINGTON mean time.

6:7 A. M. MEXICO mean time.
7:7 A. M. SAN JOSE mean time.
0:6 P. M. LISBON mean time.
0:28 P. M. MADRID mean time.
0:43 P. M. GREENWICH mean time.
0:53 P. M. PARIS mean time.
1:1 P. M. BRUSSELS mean time.
1:4 P. M. UTRECHT mean time.
1:13 P. M. BERNE mean time.

10:2 P. M. TOKEI mean time.

1:26 P. M. CHRISTIANIA mean time.
1:33 P. M. COPENHAGEN mean time.
1:33 P. M. ROME mean time.
1:37 P. M. BERLIN mean time.
1:49 P. M. VIENNA mean time.
1:55 P. M. STOCKHOLM mean time.
2:18 P. M. ATHENS mean time.
2:39 P. M. CONSTANTINOPLE mean time.
2:44 P. M. ST. PETERSBURG mean time.

ALGERIAN SERIES.

Furnished by the coöperation of General d'Eudeville, Commandant Supérieur du Génie in Algeria.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Nemours	.....	.....	30.32	770.2	61.7	16.5	62	Calm	.....	.....	0	.....	1	.....	.....	0	0	Clear	Charnot.
Algiers	.....	.....	30.32	770.2	54.5	12.5	.....	WNW	.....	.....	1	.....	3	.....	.....	0	0	Fair	Peter.
La Calle	.....	.....	30.05	763.3	56.3	13.5	71	N	.....	.....	4	.....	6	.....	.....	0.079	2.0	Fair	Fleury.
Tunis	.....	.....	30.03	762 8	53.6	12.0	.....	WNW	.....	.....	3	.....	7	.....	.....	0.079	2.0	Cloudy	Jacques.
Sfax	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Saida	.....	.....	30.27	768.8	56.7	13.7	84	ENE	.....	.....	1	.....	1	.....	.....	0	0	Clear	Millot.
Tebessa	.....	.....	30.12	765 1	40.1	4.5	.....	NNW	.....	.....	3	.....	2	.....	.....	0	0	Clear	Bourgeois.
Geriville	.....	.....	30.17	766.3	51.4	10.8	100	NW	.....	.....	4	.....	0	.....	.....	0	0	Clear	Lemaillot.
Laghount	.....	.....	30.07	763.6	55.4	13.0	55	S	.....	.....	1	.....	0	.....	.....	0	0	Clear	Guyot.
Biskra	.....	.....	30.11	764.7	65.7	18 7	35	NW	.....	.....	5	.....	4	.....	.....	0	0	Fair	Kuntz.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—In the originals the distinction between the amount of upper and lower clouds is apparently not made. The weather is published as given. The rain-fall is measured at 7 a. m., local time.

AUSTRIAN SERIES.

Furnished by the cooperation of Professor Ferdinand Osnaghi, Director of the Imperial and Royal Central Meteorological Institute at Vienna.

Agram	.....	.....	30.39	772.0	36.9	2.7	79	SW	.....	.....	2	.....	6	.....	.....	0	0	.....	Prof. Ivan Stoair.
Cracow, I. R. Observatory	.....	.....	30.58	776.7	36.3	2.4	96	E	.....	.....	1	.....	6	.....	.....	0	0	.....	Dr. Wierzbiski.
Eperies	.....	.....	30.42	772.6	33.1	0.6	75	N	.....	.....	3	.....	9	.....	.....	0	0	.....	Julius Mikolik.
Gratz	.....	.....	30.43	773,0	40.1	4.5	46	NW	.....	.....	5	.....	0	.....	.....	0	0	.....	Andreas Rospini.
Hermannstadt	29.13	739.9	30.34	770.7	31.1	— 0.5	85	E	.....	.....	2	.....	2	.....	.....	0	0	.....	Prof. Reissenberger
Kremsmünster	28.84	732.4	30.58	776.8	33.8	1.0	89	Calm	.....	.....	0	.....	10	.....	.....	0	0	.....	Prof. C. Wagner.
Lemberg	29.16	740.6	30.50	774.6	27.3	— 2.6	98	SW	.....	.....	1	.....	10	.....	.....	0	0	.....	Dr. T. Stanecki.
Nyiregyhaza	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Habzsuda Daniel.
Pola	.....	.....	30.24	768.2	45.9	7.7	58	ENE	.....	.....	6	.....	1s	.....	.....	0	0	.....	I.R.Hydrographic Of'ce.
Szegedin	.....	.....	30.35	770.9	34.5	1.4	74	N	.....	.....	2	.....	0	.....	.....	0	0	.....	Karl Stancel.
Trieste	.....	.....	30.35	771.0	46.4	8.0	46	E	.....	.....	1	.....	2	.....	.....	0	0	Almost clear	Prof. V. Farolfi.
Vienna	.....	.....	30.52	775.2	35.1	1.7	70	NW	.....	.....	3	.....	3	.....	.....	0	0	.....	I. R. Central Met. Obs'y.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
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.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 7 p. m., local time. The elevation of Gratz is 343.5 meters, or 1,126.9 feet; Hermannstadt, 407.8 meters, or 1,337.9 feet; Kremsmünster, 383.6 meters, or 1,258.5 feet.

BELGIAN SERIES.

Furnished by the coöperation of J. C. Houzeau, Director of the Royal Observatory at Brussels.

Arlon	.....	.....	30.71	780.0	28.2	— 2.1	100?	NW	.....	.....	2	.....	8	.....	.....	0	0	.....	Royal Observatory.
Brussels	.....	.....	30.66	778.7	34.9	1.6	95	NNE	.....	.....	0	.....	10	.....	.....	0	0	Foggy	
Furnes	.....	.....	30.61	777.5	35.2	1.8	92	SSE	.....	.....	2	.....	10	.....	.....	0.016	0.4	.....	
Maeseyck	.....	.....	30.67?	778.9?	31 6	— 0.2	98	SSW	.....	.....	0	.....	10	.....	.....	0	0	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—In the originals, the weather is occasionally given in general notes.

BRITISH SERIES

Furnished by the coöperation of Robert H. Scott, Esq., Director of the Meteorological Office, London, Alexander Buchan, Secretary of the Scottish Meteorological Society, Edinburgh, and the respective Observers.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Aberdeen			30.44	773.2	40.0	4.4		SSW	6	2.7			1			0	0	Hazy	William Boswell.
Ardrossan			30.45	773.4	42	5.6		E			1		7					*D. clouds	William McNeil.
Armagh, Observatory			30.42	772.7	46.4	8.0		SSE	13	5.8			9					Overcast	S. Call, for Dr. Robinson.
Birr Castle, (Parsonstown)			30.38	771.6	47.8	8.8		SE			1		10					Overcast	J. Dreyer.
Bradford			30.51	774.9	46.9	8.3		SW			2		2			0	0	*D. clouds	J. McLandsborough.
Bridgetown, (Barbados)			30.06	763.5	79.0	26.1		NE			2		4?					Overcast?	Sergt. J. F. Halanen, A. H.Todd. [H.C.
Cambridge, Observatory			30.60	777.2	43.0	6.1		SW			1		5c					*D. clouds	John McLaren.
Cardington			30.60	777.2	38.0	3.3		SW			1		6					*D. clouds	T. Bell, for J. Cartmell.
Carlisle																			Maj. C. N. Martin, R.E.
Chatham, School M. E			30.64	778.2	41.2	5.1		W			2		2					Blue sky	R. E. Power.
Dartmoor	28.99	736.3	30.56	776.2	40.4	4.7		E			1		10					Gloomy	Francis Redford, M. A.
Davos Platz, (Switzerland)	25.11	637.8			24.0	— 4.4	69	NE			1		8			0.008	0.20	Snowing	J. Mac Gowan.
Donaghadee			30.43	772.9	46	7.8		SSE			3		8					*D. clouds	J. Costello.
Dover			30.63	778.0	43	6.1		SW			2		3					¼ clouded	Thomas Mackereth.
Eccles, (near Manchester)			30.53	775.4	46.7	8.2		S	0.8	0.4			3					*D. clouds	The Staff.
Falmouth, Observatory			30.50	774.7	47.3	8.5		SSE			4		10					Overcast	P'vt. G.Salmon, A. H. C
Fort Napier, (Natal)	27.48	698.0	29.71	754.6	92.1	33.4		SE			2		3					*D. clouds	
Free Town, (Sierra Leone)			29.90	759.4	84	28.9		N			0		2					*D. clouds	
Galway, Queen's College			30.26	768.6	45	7.2		S			3		10					Gloomy	Prof. A. H. Curtis.
Gibraltar, (Mediterranean)			30.25	768.3	59.8	15.4		NE			2		7					*D. clouds	Corpl. C. Aitken, A.H.C.
Glasgow, Observatory			30.44	773.2	36.8	2.7		NE			1		10					Gloomy	Lewis Stuart.
Great Yarmouth			30.60	777.2	41	5.0		W			2		2					Hazy	G. T. Watson.
Greenwich, Royal Obs'y			30.62	777.7	43.6	6.4		SSW			1		7					*D. clouds	The Staff, for G. B. Airy.
Guernsey			30.54	775.7	42.5	5.8		SE			3		7					*D. clouds	Dr. S. E. Hoskins.
Helston			30.50	774.7	47	8.3		S			4		4c			0	0	Fine	M. P. Moyle.
Holyhead			30.40	773.7	45	7.2		S			3		1					Blue sky	John Tilston.
Kew, Observatory			30.62	777.7	42.6	5.9		SW	1	0.4			8					Misty	The Staff.
Kingstown			30.44	773.2	47	8.3		SSE			3		3					Blue sky	George Mitchell.
Leicester Museum			30.57	776.5	44.0	6.7		Calm			0		1					*D. clouds	Wm. J. Harrison, F.G.S.
Malta, (Mediterranean)			29.97	761.2	54.0	12.2		NE			2		6k					*D. clouds	Corp'l. P. Bravis, A.H.C.
Nairn			30.36	771.1	40	4.4		SW			1		0					Clear	W. D. Penny.
Nassau, (Bahamas)			30.16	766.1	77	25.0		NE			1		2					*D. clouds	Surg. Maj. Henry.
Nottingham, Observatory			30.56	776.2	45.3	7.4		SSW			3		0			0	0	Blue sky	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			30.56	776.2	43.8	6.6		SSW			3		10					Misty	Rev. Stephen Whitty.
Oxford, Radcliffe Obs'y			30.57	776.5	43	6.1		S			1		10					Overcast	J. Lucas.
Plymouth			30.52	775.2	45.1	7.3		SE			4		4?					Overcast?	John Merrifield.
Roche's Point			30.38	771.6	50	10.0		SSW			5		10					Overcast	W. Kennedy.
Saint Ann's Head			30.47	773.9	47	8.3		SE			5		10					Overcast	John C. Walker.
Saint Helier, (Jersey)			30.57	776.5	41.8	5.4		SE			3		10					Overcast	A. P. Amy.
Sandwick Manse, (Orkneys)			30.33	770.4	43.5	6.4		SW	25	11.2			0					Blue sky	Rev. C. Clouston, LL. D.
Scarborough																			F. Shaw.
Scutari Cemetery, (Turkey)			29.93	760.2	46.2	7.9		NE			2		10					Drizzling	Sergt. W. H. Lyne.
Sheffield			30.55	776.0	45.5	7.5		SW			3		0			0	0	Blue sky	W. F. Cooper.
Silloth Rectory			30.48	774.2	44.1	6.7	93	Calm			0		6			0	0	*D. clouds	Rev. Francis Redford.
Stonyhurst, Observatory			30.53	775.4	44.9	7.2		SW			0		5					Blue sky	Rev. S. J. Perry.
Stornoway, Lews C., (Hebr.)			30.26	769.1	41	5.0		SSW			2		8					Threatening	John Smith.
Stratfield Turgiss			30.61	777.5	40.1	4.5		SE			1		9					Overcast	Rev. Charles H. Griffith.
Thurso			30.33	770.4	42	5.6		SSW			2		1					Blue sky	John Trotter.
Truro, Royal Institution			30.48	774.2	48	8.9		SE			7		8					Gloomy	W. Newcombe.
Valencia, Observatory			30.30	769.6	49.9	9.9		SSW	26	11.6			10					Drizzling	The Staff.
Sub-Series.																			Henry Mercer.
Calf of Man, (Isle of Man)					47	8.3		SW			3		3			0	0		The Staff, for E.J. Stone.
Cape Good Hope, Obs'y			30.06	763.5	74.2	22.4	52	S	22	9.8		10	10						Francis Abbott, F.R.A.S.
Hobart Town, (Tasmania)			29.82	757.4	66.5	19.2	94	W			1		7k			0	0		Andrew Gibb.
Leith, Restalrig Park			30.49	774.4	37.0	2.8		NE			1		10k			0.26	6.6	Hazy	C. Meldrum.
Mauritius, Observatory			29.95	760.7	86.5	30.3	50	WSW	16.0	7.2		2	4		S	0	0	*D. clouds	R. L. J. Ellery.
Melbourne, Observatory			30.20	767.1	60.0	15.6	61	SSW	16	7.2			9			0	0	Boisterous	J. Youngclause.
Monach L't-house, (Hebrides)			30.22	767.6	46	7.8		S			6		10			0	0		Robert Burnet.
North Unst, (Shetland Is.)			30.20	767.1	44	6.7		W			6	5	7	W		Blank	Blank		

Note.—Generally, the originals do not give the relative humidity, rain-fall, or distinction between upper and lower clouds. The originals give the wind direction to 32 points and weather by the Beaufort notation. The originals give the barometer for Aberdeen, Cardington, Galway, Oxford, St. Helier, Sandwick, Scarborough, Stonyhurst, Leith, Monach and North Unst as read off and the cloudiness for Stornoway by the scale 0 to 4. The wind-force is given by the scale 0 to 12 in the official series; 0 to 6 in the sub-series; except in lbs. per square foot for Greenwich and Hobart Town. The rain-fall is measured at Aberdeen at 10 a. m.; Bradford, 9 a. m.; Hobart Town, 7:30 a. m.; Nottingham, 6 p. m.; Mauritius, 9 a. m., local time. The elevation of Dartmoor is 1,400 feet, or 426.7 meters; Davos Platz, 5,105? feet, or 1,556.0? meters; Fort Napier, 2,200 feet, or 670.6 meters. *Detached clouds.

COSTA RICA SERIES.

By authority of the Minister of Foreign Affairs.

Furnished by the coöperation of Senor Federico Maison, Director of the Central Office of Statistics and Meteorology.

San José																			

DANISH SERIES.

Furnished by the coöperation of Captain N. Hoffmeyer, Director of the Royal Danish Meteorological Institute at Copenhagen.

Copenhagen			30.32	770.0	36.5	2.5	91	W			4		7						
Fanöe			30.47	773.9	39.2	4.0	92	WSW			4		1						
Godthaab, (Greenland)			28.20	716.3	19.2	— 7.1	100	NW			5		10					Snowing	
Stykkisholm, (Iceland)			29.10	739.2	37.9	3.3	98	S			8		10					Raining	
Thorshavn, (Faröe)			30.04	763.1	38.8	3.8	92	SW			5		10						
Vestervig			30.36	771.1	38.1	3.4	93	WNW			6		10						

Note.—The originals give the wind-force by the scale 0 to 6; occasionally, weather by Vienna system; no distinction between the amount of upper and lower clouds.

FRENCH SERIES.

Furnished by the cooperation of His Excellency, U. J. Le Verrier, Director of the Paris Observatory, and the respective Observers.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather	Observer.
Alençon	.....	.....	30.61	777.4	48.2	9	73	ENE	.....	.....	2	.....	2cn	.....	NE	0	0	Slightly cl'dy	Normal School.
Amiens	.....	.....	30.67	779.0	32.2	0.1	85	WNW	.....	.....	3	.....	5	.....	W	0	0	Cloudy	Normal School.
Avignon	.....	.....	30.32	770.2	44.8	7.1	67	N	.....	.....	6	.....	.....	.....	.....	0	0	Lightly cov.	Normal School.
Bar-sur-Seine	.....	.....	30.65	778.5	37.9	3.3	75	NNW	.....	.....	1	.....	0	.....	.....	0	0	Clear	C. Sailliard.
Beaumette, (near Angers)	.....	.....	30.63	778.1	40.8	4.9	67	E	8.1	3.6	.....	.....	.....	.....	WNW	0	0	.....	Beaumette Observ'tory.
Beauvais	.....	.....	30.67	779.0	32.9	0.5	90	NE	.....	.....	1	.....	10	.....	.....	0	0	Covered	Normal School.
Besançon	.....	.....	30.58	776.7	37.0	2.8	78	ENE	.....	.....	4	.....	0	.....	.....	0	0	Clear	Normal School.
Bourg en Bresse	.....	.....	30.47	773.9	40.3	4.6	73	N	.....	.....	6	.....	0	.....	.....	0	0	Clear	Normal School.
Bourges	.....	.....	30.51	775.0	41.7	5.4	75	NE	.....	.....	2	.....	2	.....	NE	0	0	Slightly cl'dy	Normal School.
Brest	.....	.....	30.43	773.0	44.1	6.7	70	SE	.....	.....	3	.....	8	.....	SE	0	0	.....	Naval Observatory.
Carcassonne	.....	.....	30.35	770.9	49.1	9.5	42	W	.....	.....	.....	.....	0	.....	.....	0	0	Clear	Normal School.
Caen	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Chartres	.....	.....	30.66	778.7	40.1	4.5	41	E	.....	.....	2	.....	2	.....	W	0	0	.....	Normal School.
Châlons-sur-Marne	.....	.....	30.65	778.6	38.3	3.5	76	NE	.....	.....	1	.....	0	.....	.....	0	0	Clear	Normal School.
Clermont	.....	.....	30.52	775.2	37.8	3.2	73	N	.....	.....	1	.....	2	.....	.....	0	0	Slightly cl'dy	Puy de Dome Obs'y.
Commercy	.....	.....	30.64	778.2	32.5	0.3	97	E	.....	.....	2	.....	5kn	.....	SW	0	0	Cloudy	Normal School.
Commune de Gréasque*	.....	.....	30.31	769.8	46.2	7.9	61	NW	.....	.....	1	.....	8	.....	NW	0	0	.....	M. Kina.
Grenoble	.....	.....	30.40	772.2	41.5	5.3	72	NE	.....	.....	1	.....	10n	.....	E	0	0	Covered	Normal School.
La Roche-sur-Yon	.....	.....	30.61	777.4	44.6	7.0	66	NE	.....	.....	1	.....	1	.....	N	0.079	2.0	Slightly cl'dy	Normal School.
Le Mans	.....	.....	30.61	777.5	36.7	2.6	85	ESE	.....	.....	2	.....	0	.....	.....	0	0	Clear	Normal School.
Lons-Le-Saulnier	.....	.....	30.47	774.0	40.5	4.7	84	NE	.....	.....	6	.....	0	.....	.....	0	0	Clear	Normal School.
Lorient	.....	.....	30.54	775.8	42.8	6.0	44	ESE	.....	.....	2	.....	5	.....	E	0	0	Cloudy	Naval Observatory.
Mâcon	.....	.....	30.54	775.8	38.5	3.6	80	N	.....	.....	6	.....	0	.....	.....	0	0	Clear	Normal School.
Metz	.....	.....	30.69	779.6	32.0	0.0	74	NNE	.....	.....	2	.....	5k	.....	N	0	0	.....	M. Schuster.
Mirecourt	.....	.....	30.65	778.4	33.1	0.6	89	NNW	.....	.....	6	.....	2	.....	SSE	0	0	Slightly cl'dy	Normal School.
Nismes	.....	.....	30.31	769.9	51 8	11	68	N	.....	.....	6	.....	0	.....	.....	0	0	Clear	Normal School.
Orleans	.....	.....	30.58	776.6	37.0	2.8	80	N	.....	.....	1	.....	0	.....	.....	0	0	Clear	Normal School.
Paris, Observatory	.....	.....	30.65	778.5	33.4	0.8	.....	N	.....	.....	1	.....	0	.....	.....	0	0	Foggy	National Observatory.
Parthenay	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Privas	.....	.....	30.43	772.8	40.6	4.8	.....	NW	.....	.....	2	.....	2	.....	NW	0	0	Slightly cl'dy	Normal School.
Rochefort, Observatory	.....	.....	30.49	774.5	47.3	8.5	55	ENE	.....	.....	3	.....	0	.....	.....	0	0	Clear	Naval Observatory.
Rouen	.....	.....	30.68	779.3	35.4	1.9	83	ENE	.....	.....	2	.....	8	.....	NE	0	0	Very cloudy	Normal School.
Saint Lo	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Tarbes	29.28	743.8	30.39	771.8	50.0	10	59	E	.....	.....	2	.....	0	.....	.....	0	0	Clear	Normal School.
Villefranche	.....	.....	30.51	774.9	42.8	6	76	NW	.....	.....	6	.....	0	.....	.....	0	0	Clear	Normal School.
SUB-SERIES.																			
Fort de France, Martinique	.....	.....	30.07	763.7	75.2	24	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	L'Abbé Marchési.
Marseilles	.....	.....	30.25	768.3	50.2	10.1	52	NW	.....	.....	1	.....	5	.....	.....	0	0	Partly cl'dy.	Marseilles Observatory.
Mont-Louis	25.03	635.7	30.34	770.7	41.9	5.5	21	N	9.3	4.17	.....	.....	0	.....	.....	0	0	.....	—. Falguère.
Montsouris, Paris	.....	.....	30.63	778.0	32.9	0.5	95	N	.....	.....	2	.....	10	.....	.....	0	0	.....	Montsouris Observatory
Perpignan	.....	.....	30.35	770.9	52.5	11.4	25	NE	14.9	6.66	.....	.....	0	.....	.....	0	0	.....	Dr. Fines.
Pic du Midi, (Summit,) H. P.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. Baylac.
Pic du Midi, (Plantade,) H. P.	22.68	576.1	.....	.....	33.8	1.0	.....	N	.....	.....	3	.....	0	.....	.....	0	0	Clear	General de Nansouty.
Saint Maur, (near Paris)	.....	.....	30.63	778.0	33.6	0.9	86	NNE	.....	.....	1	...	10	.....	.....	0	0	.....	E. Renou.
Toulouse	.....	.....	30.42	772.7	43.2	6.1	53	N	.....	.....	1	.....	0	.....	.....	0	0	Light fog	Toulouse Observatory.
Tours	.....	.....	30.56	776.2	37.4	3.0	83	ESE	.....	.....	2	.....	1	.....	E	0	0	.....	C. Marquet.
Versailles, (near Paris)	.....	.....	30.62	777.8	32.7	0.4	100	N	.....	.....	1	.....	0	.....	.....	0.006	0.16	Clear	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai)	.....	.....	30.23	767.7	48.2	9.0	86	ESE	14.9	6.67	.....	.....	10	.....	.....	0.031	0.8	.....	Marc Dechevrens, S. J.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—Generally, the originals give the wind-force by the scale 0 to 7; no distinction between upper and lower clouds, and, in the official series, the amount by the scale 0 to 4; the rain-fall as measured at 7, 8 or 9 a. m., local time; at Clermont, 9 a. m. of the following day; the weather in general terms as published. The elevation of Clermont is 388 meters, or 1,272.9 feet; Commune de Gréasque, 322 meters, or 1,056.4 feet; Tarbes, 308 meters, or 1,010 feet; Mont-Louis, 1,580.40 meters, or 5,204.8 feet; Pic du Midi, (Summit,) 2,877 meters, or 9,439.1 feet; Pic du Midi, (Plantade,) 2,366 meters, or 7,762.6 feet. In correcting the Mont-Louis barometric observations for altitude, the constant 135. millimeters has been added. *Bouches-du-Rhône

GERMAN SERIES.

Furnished by the coöperation of Professor Dr. G. Neumayer, Director of the German Naval Observatory, Hamburg.

Bamberg	.....	.....	30.56	776.2	34.3	1.3	68	NW	.....	.....	2	.....	3	.....	.....	0	0	.....	Prof. T. Hoh.
Berlin	.....	.....	30.62	777.7	30.5	2.5	65	W	.....	.....	2	.....	10	.....	.....	0	0	.....	Prof. Arndt.
Breslau	.....	.....	30.59	777.0	30.6	— 0.8	95	NW	.....	.....	2	.....	10	.....	.....	0.161	4.6	.....	Royal University Obs'y.
Carlsruhe	.....	.....	30.65	778.4	34.0	1.1	72	N	.....	.....	1	.....	10	.....	.....	0	0	.....	A. Senz.
Cassel	.....	.....	30.67	779.0	30.6	— 0.8	85	NNW	.....	.....	3	.....	10	N	.....	0	0	.....	Dr. H. Möhl.
Crefeld	.....	.....	30.65	778.6	35.2	1.8	89	SE	.....	.....	2	.....	10	.....	.....	0	0	Foggy	Director Lose.
Emden	.....	.....	30.65	778.5	38.3	3.5	91	W	.....	.....	1	.....	10	.....	.....	0	0	.....	Prof. Prestel.
Frankfort on the Main	.....	.....	30.70	779.7	33.1	0.6	79	ENE	.....	.....	1	.....	3	.....	.....	0	0	.....	Physical Society.
Friedrichshafen	29.10	739.2	30.63	777.9	32.5	0.3	87	NE	.....	.....	7	.....	10	.....	.....	0	0	.....	M. Wilhelm.
Hamburg	.....	.....	30.56	776.1	35.2	1.8	96	SW	.....	.....	5	.....	10ks	.....	.....	Inap.	Inap.	Cloudy	Captain F. Hegemann.
Kiel	.....	.....	30.60	777.6	36.9	2.7	93	W	.....	.....	2	.....	10	.....	.....	0.039	1.0	.....	Prof. G. Karsten.
Königsberg, (Prussia)	.....	.....	30.48	774.3	27.0	— 2.8	97	W	.....	.....	2	.....	10	.....	.....	0.043	1.1	Snowing	Prof. E. Luther.
Koslin	.....	.....	30.54	775.7	30.0	— 1.1	.....	SSW	.....	.....	3	.....	10	.....	.....	0	0	Foggy	H. Müller.
Leipsic	.....	.....	30.65	778.6	33.6	0.9	80	WSW	.....	.....	1	.....	9	W	.....	0.161	4.1	.....	Prof. Bruhns.
Memel	.....	.....	30.48	774.3	30.2	— 1.0	100	SW	.....	.....	3	.....	10ks	.....	.....	0	0	.....	Reinbrecht & Skalweit.
Münster	.....	.....	30.61	777.5	35.6	2.0	98	SW	.....	.....	1	.....	10	.....	.....	0	0	Foggy	Prof. E. Heis.
Neufahrwasser	.....	.....	30.53	775.4	30.2	— 1.0	84	SSW	.....	.....	3	.....	3	.....	.....	0	0	.....	A Lothe.
Posen	.....	.....	30.59	776.9	29.7	— 1.3	95	W	.....	.....	3	.....	10	.....	.....	0	0	.....	Dr. Magener.
Strassburg, (in Alsace)	.....	.....	30.65	778.6	35.2	1.8	77	NE	.....	.....	2	.....	3	NE	.....	0	0	.....	Dr. Schur.
Stuttgart	.....	.....	30.65	778.6	33.3	0.7	78	E	.....	.....	1	.....	10	.....	.....	0	0	.....	Prof. Schoder.
Thorn	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Dr. Hasenbalg.
Treves, (Trier)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Prof. Flesch.
Weissenburg, (Bavaria)	29.02	737.1	30.60	777.1	34.7	1.5	77	E	.....	.....	2	.....	2	.....	.....	0	0	.....	Dr. von Bebber.
Wustrow, Naval School	.....	.....	30.62	777.8	32.2	0.1	79	ENE	.....	.....	1	.....	9	NE	.....	0.236	6.0	.....	E. F. Schütz.
GERMAN NAVAL SERIES.	.....	.....	30.54	775.8	34.7	1.5	100	SW	.....	.....	5	.....	10	.....	.....	0	0	Foggy	

NOTE.—The elevation of Friedrichshafen is 413.4 meters, or 1,356.3 feet; Weissenburg, 431 meters, or 1,414.0 ft. In the originals the distinction between the amount of upper and lower clouds is not made. It is not always certain that the remarks in the weather column refer to the moment of observation.

GREEK SERIES.

Furnished by the cooperation of Professor Dr. J. F. Julius Schmidt, Director of the Royal Observatory at Athens.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Athens			29.87	758.6	49.1	9.5		N										Cloudy	

Note.—The originals give the barometer corrected, but not reduced to sea-level; occasionally the kind of clouds; the weather as published. They omit the humidity, wind-force, amount of cloudiness and rain-fall.

ITALIAN SERIES.

Furnished by the coöperation of His Excellency the Minister of Agriculture, Industry and Commerce, and the respective Observers.

Udine			30.30	769.7	47.8	8.8	37	Calm	0	0			1			0	0		Prof. Giovanni Clodig.
Stelvio	22.24	564.8			12.9	—10.6		NE			1		2	SW		0.012	0.3		Signora Ernesta Manfredi.
Valdobbia	22.24	565.0			18.0	— 7.8	67	NE			2		7	NE		0	0		Ab. Dom. Mongini.
Padua			30.31	769.9	46.4	8.0	49	NNE	3.8	1.7			0?			0.094	2.4	Raining?	Prof. Dott. Lorenzoni.
Vicenza			30.32	770.2	46.2	7.9	54	SE	1.8	0.8			0?			0.110	2.8	Raining?	Conte Alm. Da Schio.
Verona			30.32	770.2	46.8	8.2	70	E			1		3			0	0		Dott. B. Bertoncelli.
Bergamo	28.95	735.2	30.32	770.0	44.4	6.9	59	SW			1		1			0	0		Prof Trionfini Carlo.
Domodossola			30.34	770.7	41.9	5.5	70	Calm			0		5			0	0		Prof. Giuseppe Colza.
Milan			30.33	770.3	46.4	8.0	73	W			1		2			0	0		Ab. Gio. Capelli.
Pavia			30.35	771.0	43.7	6.5	70	NE			4		1	NE		0.051	1.5	Raining	Prof. Gio. Cantoni.
Moncalieri			30.37	771.5	43.2	6.2	72	NNE	1.8	0.8			5	NE		0	0		Prof. P. F. Denza.
Mondovi	28.37	720.7	30.36	771.2	41.2	5.1	60	WNW			4		2	N		0.098	2.5		Prof. D. C. Bruno.
Porto Maurizio			30.30	769.6	54.5	12.5	25	NNE			4		1			0	0		Prof. L. Vassallo.
Genoa			30.27	768.9	51.3	10.7	48	N	0 9	3.1			0			0	0		Prof. G. M. Garibaldi.
Piacenza			30.36	771.1	44.8	7.1	67	E	3.1	1.4			2			0.188	4.8	Raining	Dott. G. Manzi.
Parma			30.36	771.1	45.5	7.5	65	E			4		1			0.154	3.9		Prof. P. Pigorini.
Florence			30.27	768.8	48.2	9.0	44	NW			6		1			0	0		Cav. F. Meucci.
Leghorn			30.21	767.3	50.0	10.0	36	ENE	13.7	6.1			1			0	0		Prof. P. Monte.
Siena	28.95	735.4	30.21	767.2	44.4	6.9	48	ENE	15.4	6.9			1	NE		0	0		Prof. L. Toscani.
Urbino	28.64	727.4	30.27	768.9	40.1	4.5	77	N			4		10			0	0		Prof. P. Serpieri.
Pesaro			30.27	768.9	47.3	8.5	66	NNE	32.2	14.4			10	N		0	0		Prof. Luigi Guidi.
Ancona			30 24	768.0	47.7	8.7	61	N			2		2			0	0		Prof. F. De— Bosis.
Grosseto			30.17	766.3	50.7	10.4	51	NNE			6		3	SE		0	0		Avv. P. Ponticelli.
Rome			30.09	764.2	53.2	11.8	54	NNE	12.5	5.6			2			0	0		Prof's. P. Secchi & L. Respighi.
Naples, O. U			30.08	763.9	52.7	11.5	41	NE			4		4			0	0		Prof. L. Palmieri.
Lecce			30.01	762.3	47.7	8.7	48	NNE	15.4	6.9			2			0	0		Prof. C. De—Giorgi.
Cosenza			30.06	763.5	48.0	8.9	70	NW	7.4	3.3			10			0	0		Prof. F. D. Conti.
Cagliari																			Prof. A. Pacinotti.
Ripostо, (Sicily)			30.00	761.9	53.4	11.9	55	E			2		4	SW		0	0		Prof. F. Cafiero.
Palermo			29.97	761.1	52.0	11.1	45	E	6.3	2.8			4			0.043	1.1	Raining	Prof. G. Cacciatore.
Caltanissetta	27.98	710.8	29.99	761.8	43.5	6.4	65	N			2		2	E		0	0		Prof. A. Pagani.
Siracusa			29.98	761.5	52.9	11.6	42	NE			2		7	NW		0	0		Prof. V. Giuliano.
Sub-Series.																			
Naples, S. R			30.09	764.2	48.2	9.0	51	NNE	8.7	3.9			3	NE		0	0		Prof. F. Brioschi.

Note.—The originals give the wind-force by the scale 0 to 4, or the velocity in kilometers per hour; generally, no distinction between upper and lower clouds: occasionally the weather by the Vienna symbols. The elevation of Stelvio is 2,543.0 meters, or 8,342.9 feet; Valdobbia, 2,548.0 meters or 8,359.3 feet; Bergamo, 370.6 meters, or 1,24 3 feet; Mondovi, 556 meters, or 1,824.2 feet; Siena, 348.5 meters, or 1,143.3 feet; Urbino, 451 meters, or 1,479.7 feet; Caltanissetta, 570.3 meters, or 1,871.0 feet.

JAPANESE SERIES.

Furnished by the coöperation of the Imperial University of Tokei, Japan.

Tokei			30.27	768.8	35	1.7		NW	10	4.5			0			0	0		Prof. P. V. Veeder.

Note.—The originals give the amount of cloudiness by the scale 0 to 4 without distinguishing between upper and lower clouds. The rain-fall is measured at 7 a. m., local time

MEXICAN SERIES.

By authority of the Secretary of Public Works.

Furnished by the coöperation of Senor Mariano Barcena, Director of the Central Meteorological Observatory in the City of Mexico.

Mexico																			Mariano Barcena. Vicente Reyes. Miguel Perez. (Engineers in charge.)

Note.—The elevation of Mexico is 2,290 meters, or 7,512.9 feet. The rain-fall is measured at 6 a. m., local time.

NETHERLANDS' SERIES.

Furnished by the cooperation of Professor Buys Ballot, Director of the Royal Meteorological Institute of the Netherlands at Utrecht.

Flushing			30.68	779.3	39.2	4.0		S			2					0	0		
Groningen			30.54	775.6	39.2	4.0		SW								0	0		
Heider			30.58	776.6	45.5	7.5		SW			2					0	0		
Utrecht			30.61	777.6	32.5	0.3	91	S			3					0	0	Hazy	

Note.—The originals give the wind-pressure in kilograms per square meter; for Utrecht, they give the weather as published, from which the amount of cloudiness is taken by the scale 0 to 4, without distinguishing between upper and lower clouds. It is assumed that the barometer readings have been reduced to sea-level.

NORWEGIAN SERIES.

Furnished by the coöperation of Professor H. Mohn, Director of the Royal Norwegian Meteorological Institute at Christiania.

Bergen			30.21	767.4	33.3	2.4	89	NNW	3.8	1.7			4			0.181	4.6		
Brönо			29.74	755.5	37.4	3.0	87	WSW	24.6	11			10					Raining	
Christiania			30.05	763.2	38.5	3.6	60	SW	5.4	2.4			0			0	0		
Tromsö			29.56	750.7	35.6	2.0	75	SW	4.5	2			10			0	0		

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols. The cloudiness and weather at Bergen refer to 2h., p. m., local time, instead of 1h., p. m.

PORTUGUESE SERIES.

Furnished by the coöperation of J. C. de Brito Capello, Director of the Meteorological Observatory of the Infante Don Luiz at Lisbon.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Upper. 0—10.	Clouds. Amount. Lower. 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Angra, (Azores)	.....	.....	30.00	762.1	55.8	13.2	86	NE	13.0	5.8	.....	.....	5	.....	.....	0.472	12.0	Raining	Dr. J. A. Sampaio.
Campo Major	.....	.....	30.80	769.6	53.6	12.0	74	ENE	6.5	2.92	.....	.....	2	.....	.....	0	0	Sclar-corona	Dr. A. M. R. dos Santos.
Funchal, (Madeira)	.....	.....	30.12	765.1	68.0	20.0	52	SSE	5.2	2.33	.....	.....	0	.....	.....	0	0	.....	Capt. D. A. de Cunha.
Lisbon	.....	.....	30.32	770.1	53.6	12.0	81	NNE	9.8	4.4	.....	.....	5	.....	SE	0	0	.....	The Observatory.
Ponta Delgada, (Azores)	.....	.....	29.96	760.9	57.6	14.2	76	NE	4.9	2.2	.....	.....	3	.....	.....	0.512	13.0	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—The originals give the wind-velocity in kilometers per hour; occasionally, the weather by the Vienna symbols; the amount of cloudiness without distinguishing between upper and lower clouds; the barometer corrected but not reduced to sea-level. The rain-fall at Lisbon is measured at noon instead of 0 h. 6 m. p. m.

RUSSIAN SERIES.

Furnished by the coöperation of Professor H. Wild, Director of the Imperial Central Physical Observatory of Russia, at St. Petersburg.

Warsaw	.....	.....	30.54	775.8	24.1	— 4.4	91	SE	2	1	.....	.....	10	.....	.....	.....	.....	Light fog	Astronomical Obs.
Wilna	.....	.....	30.54	775.7	23.4	— 4.8	85	Calm	0	0	.....	.....	10	.....	.....	.....	.....	.....	Astronomical Obs.
Dorpat	.....	.....	30.36	771.1	22.8	— 5.1	100	SSW	7	3	.....	.....	10	.....	.....	.....	.....	.....	Physical Cabinet.
St. Petersburg	.....	.....	30.26	768.7	25.7	— 3.5	99	WSW	11	5	.....	.....	10	.....	.....	.....	.....	.....	Central Physical Obs.
Kiutopio	.....	.....	29.90	761.8	25.2	— 3.8	.....	SW	13	6	.....	.....	10	.....	.....	.....	.....	.....	Ch. Forsten.
Kieff	.....	.....	30.51	774.9	10.4	—12.0	81	NNE	7	3	.....	.....	8	.....	.....	.....	.....	.....	Physical Cabinet.
Nikolaiev	.....	.....	30.38	771.7	15.6	— 9.1	72	N	13	6	.....	.....	0	.....	.....	.....	.....	.....	Kurdakof.
Kertch	.....	.....	30.20	767.1	29.7	— 1.3	94	NE	16	7	.....	.....	10	.....	.....	.....	.....	.....	Lagorio.
Moscow	.....	.....	30.48	774.3	18.7	— 7.4	83	SSW	4	2	.....	.....	10	.....	.....	.....	.....	.....	Meteorological Obs.
Lugan	.....	.....	30.39	771.8	7.9	—13.4	72	E	13	6	.....	.....	0	.....	.....	.....	.....	.....	Meteorological Obs.
Archangel	.....	.....	29.87	758.7	25.9	— 3.4	95	SW	22	10	.....	.....	10	.....	.....	.....	.....	.....	Ogorodnikof.
Tiflis	28.69	728.8	30.15	765.9	41.5	5.3	68	Calm	0	0	.....	.....	4	.....	.....	.....	.....	.....	Physical Observatory.
Astrakhan	.....	.....	30.40	772.1	21.4	— 5.9	82	E	4	2	.....	.....	10	.....	.....	.....	.....	.....	Sebastianof.
Kasan	.....	.....	30.07	763.4	— 3.5	—19.7	88	S	11	5	.....	.....	10	.....	.....	.....	.....	.....	Physical Cabinet.
Orenburg	.....	.....	30.45	773.3	— 1.3	—18.5	72	E	13	6	.....	.....	0	.....	.....	.....	.....	.....	Tschernischef.
Ekaterinburg	29.32	744.6	30.37	771.3	4.5	—15.3	79	SW	9	4	.....	.....	10	.....	.....	.....	.....	.....	Meteorological Obs.
Nukuss	.....	.....	30.34	770.7	16.9	— 8.4	76	ENE	9	4	.....	.....	2	.....	.....	.....	.....	.....	.....
Kasaly	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Bobref.
Tashkend	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Michelson.
Barnaul	.....	.....	31.03	788.2	—29.5	—32.5	85	Calm	0	0	.....	.....	0	.....	.....	.....	.....	.....	Meteorological Obs.
Yeniseisk	.....	.....	30.67	779.0	—40.4	—40.2	75	Calm	0	0	.....	.....	1	.....	.....	.....	.....	.....	Marks.
Irkutsk	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Usolxef.
Peking, (China)	.....	.....	30.37	771.5	27.9	— 2.3	77	Calm	0	0	.....	.....	8	.....	.....	.....	.....	.....	Physical Observatory.
Nertchinsk	28.12	714.2	30.55	776.0	—23.4	—30.8	94	Calm	0	0	.....	.....	4	.....	.....	Blank	Blank	.....	Meteorological Obs.
Vladivostock	.....	.....	30.48	774.2	7.9	—13.4	48	NW	7	3	.....	.....	0	.....	.....	.....	.....	.....	.....
Nikolaievsk, on the Amoor	.....	.....	.....	.....	— 1.7	—18.7	.....	W	11	5	.....	.....	0	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols; they omit the rain-fall. The elevation of Tiflis is 409 meters, or 1,341.8 feet; Ekaterinburg, 306.4 ? m., or 1,005.2 ? ft.; Tashkend, 494.2 ? m., or 1,621.3 ? ft.; Irkutsk, 392 m., or 1,286 ft.; Nertchinsk, 592.0 ? m., or 1,942.2 ? ft.

SPANISH SERIES.

Furnished by the coöperation of Antonio Aguilar, Director of the Royal Observatory at Madrid, and of Don Cecilio Pujazon, Captain R. N., Director of the Naval Observatory at San Fernando.

Madrid	.....	.....	30.34	770.7	50.5	10.3	63	N	2.2	1.00	.....	1	0	NE	.....	0.004	0.1	Light clouds	Royal Observatory.
San Fernando	.....	.....	30.28	769.2	62.1	16.7	72	E	0	0	.....	3	1	SE	SE	.....	.....	.....	Naval Observatory.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—The originals give the weather in general terms, as published; rain-fall for San Fernando from preceding to following midnight; wind-velocity for Madrid in kilometers per hour.

SWEDISH SERIES.

Furnished by the coöperation of Professor R. Rubenson, Director of the Royal Swedish Meteorological Institute, at Stockholm, and of Dr. H. H. Hildebrandsson, Chief of the Meteorological Division of the Upsala Observatory.

Haparanda	.....	.....	29.79	756.6	20.5	— 6.4	95	SW	.....	.....	2	.....	0	.....	.....	0	0	.....	
Umea	.....	.....	29.85	758.3	19.0	— 7.2	100	SW	.....	.....	2	.....	9	.....	.....	0	0	.....	
Hernosand	.....	.....	29.88	758.9	27.0	— 2.8	98	Calm	.....	.....	0	.....	10	.....	.....	0.012	0.3	Snowing	
Stockholm	.....	.....	30.00	762.1	34.9	1.6	93	WSW	.....	.....	2	.....	10	.....	.....	0.020	0.5	.....	
Wisby	.....	.....	30.23	767.9	34.2	1.2	92	WSW	.....	.....	6	.....	10	.....	.....	0	0	.....	
Sub-Series.																			
Upsala	.....	.....	29.97	761.2	35.8	2.1	94	SSW	15.0	6.7	.....	.....	10	.....	SW	0.061	1.55	Raining	Dr. Hildebrandsson.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—The originals give the wind-force by the scale 0 to 6, and Upsala also velocity in meters per second; occasionally, the weather by the Vienna symbols; or in general terms: no distinction between the amount of upper and lower clouds. The rain-fall is measured at 8 a. m., local time.

SWISS SERIES.

Furnished by the coöperation of Professor R. Wolf, Director of the Observatory at Zurich, and of Professor E. Plantamour, Director of the Observatory at Geneva.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Geneva	28.94	735.0	30.41	772.4	39.2	4.0	66	NNE	.....	.....	8	.....	3	.....	.....	0	0	Clouds	The Observatory.
Zurich	28.87	733.4	30.59	776.9	32.9	0.5	90	NE	.....	.....	1	.....	8	.....	.....	0	0	Cloudy	The Observatory.

Note.—For Geneva the corresponding departures from the normal values are: Barometer, +7.5 mm; Thermometer, +2.2 cent.; Relative Humidity, —12 per cent.

Note.—The rain-fall is measured at Zurich at 7 a. m. on the following day. The originals give the barometer corrected but not reduced to sea-level; the wind-force by the scale 0 to 4 for Zurich; the amount of cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The elevation of Geneva is 408 meters, or 1,339 feet, and that of Zurich 470 meters, or 1,542 feet.

TURKISH SERIES.

Furnished by the coöperation of A. Coumbary, Effendi, Director of the Central Observatory at Constantinople, and of Professor C. V. A. Van Dyck, Superintendent of the Lee Observatory at Beirut.

Constantinople	.....	.....	29.97	761.3	45.9	7.7	93	NNE	16	7.0	.....	.....	10	.....	NNE	0.307	7.8	.....	
Fao, (Persian Gulf)	.....	.....	30.19	766.9	63.1	17.3	.....	SE	.....	.....	1	.....	10	.....	.....	.....	.....	.....	
Salonica	.....	.....	30.11	764.9	46.9	8.3	.....	N	.....	.....	1	.....	5	.....	.....	.....	.....	.....	
Valona	.....	.....	29.91	759.8	52.3	11.3	.....	NW	.....	.....	1	.....	0	.....	.....	.....	.....	.....	
Varna	.....	.....	30.04	763.0	23.0	— 5.0	.....	N	.....	.....	10	.....	10	.....	.....	.....	.....	.....	
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y	.....	.....	29.96	761.0	60.4	15.8	84	SSW	.....	.....	2	.....	8n	.....	SW	0.13	3.3	Showery	Prof. C. V. A. Van Dyck.

Note.—The originals give the wind-force by the scale 0 to 7, (except Beirut, by the scale 0 to 12, and Constantinople velocity in meters per second;) the weather in general terms as published; no distinction between upper and lower clouds, and, except Constantinople and Beirut, the amount by the scale 0 to 4. It is assumed that the barometer is reduced to sea-level.

CANADIAN SERIES.

Furnished by the coöperation of Professor G. T. Kingston, Director of the Magnetic Observatory at Toronto, and Superintendent of the Meteorological Office of the Dominion of Canada, and the respective Observers. Those marked with a star (*) are also telegraphed daily to the office of the Chief Signal Officer, U. S. Army.

Bathurst, N. B	.....	.....	30.21	767.3	— 3.5	—19.7	83	Calm	0	0	.....	.....	0	.....	.....	.....	.....	.....	Hon. J. Ferguson.
Brockville, Ontario	.....	.....	30.25	768.3	13	—10.6	.....	Calm	0	0	.....	.....	8s	.....	W	0.02	0.5	Cloudy	W. R. Bigg.
*Chatham, N. B	.....	.....	30.30	769.6	— 6	—21.1	100	Calm	0	0	.....	8ck	2ks	W	W	0	0	Fair	G. A. Blair.
Charlottetown, P. E. Island	.....	.....	30.37	771.4	11	—11.7	82	SW	3	1.3	.....	.....	10s	.....	.....	0	0	Cloudy	H. J. Cundall, C. E.
Cornwall, Ontario	.....	.....	30.24	768.1	10.2	—12.1	79	SW	.....	.....	1	.....	10s	.....	.....	0	0	Dull	James Smith, M. A.
Dalhousie, N. B	.....	.....	30.27	768.8	.....	.....	.....	W	.....	.....	1	.....	.....	.....	.....	0	0	Clear	H. A. Johnson.
Esquimault, B. C	.....	.....	30.25	768.3	33.1	0.6	80	N	.....	.....	.....	0	0	.....	.....	0	0	Clear	W. H. Bevis.
Fredericton, N. B	.....	.....	30.40	772.1	— 9.4	—23.0	100	Calm	0	0	.....	10cs	0	.....	.....	0	0	Cloudy	Prof. Harrison.
*Fort Garry, Manitoba	.....	.....	30.50	774.7	—24	—31.1	100	N	6	2.7	.....	0	0	.....	.....	0	0	Clear	James Stewart.
Goderich, Ontario	.....	.....	30.26	768.6	18.1	— 7.7	84	SW	.....	.....	2	4k	3s	W	.....	0	0	Fair	H. J. Strang, M. A.
Granton, Ontario	29.03	737.3	30.23	767.8	15.4	— 9.2	.....	SW	.....	.....	1	1cs	0	.....	.....	0	0	Clear	James Grant.
*Halifax, N. S	.....	.....	30.43	772.9	17	— 8.3	88	E	2	0.9	.....	.....	10n	.....	.....	0	0	Cloudy	F. Allison, M. A.
Hamilton, Ontario	.....	.....	30.28	769.1	15.9	— 8.9	89	NW	.....	.....	1	4cs	0	.....	.....	0	0	Clear	G. Dickson.
Heart's Content, N. F	.....	.....	30.30	769.6	10	—12.2	100	W	.....	.....	4	2c	0	W	.....	0	0	Fine	E. Weedon.
*Kingston, Ontario	.....	.....	30.31	769.9	16	— 8.9	90	Calm	0	0	.....	.....	10s	.....	.....	0.01	0.3	Cloudy	S. Woods, M. A.
*Montreal, Quebec	.....	.....	30.24	768.1	16	— 8.9	72	SW	10	4.5	.....	5k	5ks	.....	.....	0.01	0.3	Cloudy	C. H. McLeod, C. E.
*Ottawa, Ontario	.....	.....	30.20	767.1	7	—13.9	84	N	2	0.9	.....	.....	10n	.....	N	Inap.	Inap.	Threatening	J. B. Haney.
*Parry Sound, Ontario	.....	.....	30.12	765.0	17	— 8.3	92	S	10	4.5	.....	.....	10n	.....	S	0.31	7.9	Light snow	Rev. R. Mosley.
Port Dover, Ontario	.....	.....	30.27	768.8	14	—10.0	93	S	7	3.1	.....	5k	0	W	.....	0	0	Fair	H. Morgan.
Port Hastings, N. S	.....	.....	30.43	772.9	15.8	— 9.0	.....	NW	3	1.3	.....	.....	.....	.....	.....	0	0	Fine	Peter Grant.
Port Stanley, Ontario	.....	.....	30.27	768.8	18	— 7.8	87	W	14	6.3	.....	5k	0	W	.....	0	0	Fair	M. Payne.
*Quebec, Quebec	.....	.....	30.26	768.6	15	— 9.4	82	Calm	0	0	.....	.....	10n	.....	.....	0	0	Cloudy	Capt. Ashe, R. N.
*Rockliffe, Ontario	.....	.....	30.15	765.8	9	—12.8	96	E	1	0.4	.....	.....	10s	.....	NW	0.01	0.3	Light snow	
St. John, N. B	.....	.....	30.40	772.1	13	—10.6	90	Calm	0	0	.....	.....	10n	.....	.....	Inap.	Inap.	Snowing	G. Murdoch, C. E.
*Saugeen, Ontario	.....	.....	30.14	765.5	21	— 6.1	85	SW	10	4.5	.....	.....	10s	.....	.....	0	0	Cloudy	K. Stewart.
Stayner, Ontario	.....	.....	30.16	766.1	17	— 8.3	85	SE	5	2.2	.....	.....	8ks	.....	W	0	0	Cloudy	R. J. Cole.
Stratford, Ontario	28.86	733.0	30.25	768.3	13.5	—10.3	86	SW	10	4.5	.....	2c	5s	SW	.....	0	0	Fine	C. J. MacGregor, M. A.
*Sydney, C. B	.....	.....	30.46	773.7	6	—14.4	88	SW	4	1.8	.....	10cs	0	.....	.....	0	0	Cloudy	T. C. Hill.
*Toronto, Ontario	.....	.....	30.25	768.3	13	—10.6	87	W	6	2.7	.....	5cs	0	W	.....	0	0	Fair	Magnetic Observatory.
Woodstock, Ontario	.....	.....	30.24	768.1	15.1	— 9.4	89	E	10	4.5	.....	0	2s	.....	SW	0	0	Clear	J. Montgomery.
Sub-Series.																			
St. Johns, Newfoundland	.....	.....	30.38	771.6	10.0	—12.2	79	W	.....	.....	.....	5k	5s	.....	.....	0	0	Fair	John Delany.

Note.—The originals for Brockville, Charlottetown, Port Dover, Port Stanley, Stayner, St. Johns, N. F. and those telegraphed, give the amount of cloudiness by the scale 0 to 4. The elevation of Granton is 1,015 feet, or 309.4 m.; Stratford, 1,182 feet, or 360.3 m.

UNITED STATES SERIES.

Furnished by the coöperation of Bvt. Brig. Gen. Albert J. Myer, Chief Signal Officer, U. S. Army.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain fall or melted snow in the past 24 hours. Inches.	Rain fall or melted snow in the past 24 hours. Millimeters.	Weather	Observer.
Albany, N. Y.	.....	.....	30.34	770.6	10	—12.2	79	Calm	0	0	.....	.....	10s	.....	.....	0	0	Cloudy	
Alpena, Mich.	.....	.....	30.17	766.3	17	— 8.3	67	W	15	6.7	.....	.....	10s	.....	W	Inap.	Inap.	Cloudy	
Atlantic City, N. J.	.....	.....	30.27	768.8	30	— 1.1	100	N	16	7.2	.....	.....	10n	.....	.....	0.08	2.0	Light rain	
Augusta, Ga.	.....	.....	30.09	764.3	57	13.9	97	E	3	1.3	.....	.....	10s	.....	E	0.61	15.5	Cloudy	
Baltimore, Md.	.....	.....	30.32	770.1	29	— 1.7	89	NE	4	1.8	.....	.....	10n	.....	.....	0.15	3.8	Hailing	
Barnegat, N. J.	.....	.....	30.28	769.1	29	— 1.7	100	N	18	8.0	.....	.....	10n	.....	N	0.12	3.0	Light rain	
Bismarck, Dakota	28.62	726.9	30.58	776.7	—17	—27.2	67	W	4	1.8	.....	5k	Haze	.....	.....	0	0	Fair	
Boston, Mass.	.....	.....	30.34	770.6	24	— 4.4	48	SE	1	0.4	.....	.....	10s,sm	.....	.....	0	0	Cloudy	
Breckenridge, Minn.	.....	.....	30.61	777.5	—21	— 29.4	63	SW	4	1.8	.....	0	0	.....	.....	0.01	0.3	Clear	
Buffalo, N. Y.	.....	.....	30.25	768.3	20	— 6.7	77	SW	7	3.1	.....	10k	0	SW	.....	Inap.	Inap.	Cloudy	
Burlington, Vt.	.....	.....	30.25	768.3	23	— 5.0	72	S	1	0.4	.....	.....	10s	.....	.....	0	0.	Cloudy	
Cairo, Ill.	.....	.....	30.35	770.9	34	1.1	79	N	10	4.5	.....	2ck	8s	SW	.....	0.02	0.5	Fair	
Cape Hatteras, N. C.	.....	.....	30.03	762.7	52	11.1	100	E	4	1.8	.....	.....	Fog	.....	.....	0.70	17.8	Foggy	
Cape Henry, Va.	.....	.....	30.17	766.3	25	— 3.9	100	N	24	10.7	.....	.....	10n	.....	.....	0.80	20.3	Heavy rain	
Cape Lookout, N. C.	.....	.....	30.08	764.0	53	11.7	100	E	6	2.7	.....	.....	10s	.....	.....	0.76	19.3	Cloudy	
Cape May, N. J.	.....	.....	30.25	768.3	29	— 1.7	100	N	12	5.4	.....	.....	10n	.....	.....	0.13	3.3	Light rain	
Charleston, S. C.	.....	.....	30.10	764.5	61	16.1	100	S	9	4.0	.....	.....	Fog	.....	.....	0.95	24.1	Foggy	
Cheyenne, Wyoming	24.12	612.6	30.06	763.5	—10	—23.3	100	NW	8	3.6	.....	0	1s	.....	.....	0.01	0.3	Clear	
Chicago, Ill.	.....	.....	30.38	771.6	13	—10.6	62	W	6	2.7	.....	0	0	.....	.....	0	0	Clear	
Cincinnati, Ohio	.....	.....	30.30	769.6	31	— 0.6	79	NW	3	1.3	.....	5ck	Sm'e	W	.....	0	0	Fair	
Cleveland, Ohio	.....	.....	30.32	770.1	23.5	— 4.7	78	S	10	4.5	.....	0	8s	.....	SW	0	0	Fair	
Corsicana, Tex.	.....	.....	30.22	767.6	39	3.9	81	NE	7	3.1	.....	.....	10s	.....	.....	0.15	3.8	Cloudy	
Davenport, Iowa	.....	.....	30.49	774.4	9	—12.8	78	Calm	0	0.	.....	Haze	1s	.....	.....	0	0	Fair	
Denison, Tex.	.....	.....	30.26	768.6	37	2.8	53	NE	4	1.8	.....	.....	10s	.....	NE	Inap.	Inap.	Cloudy	
Denver, Col.	25.02	635.5	30.24	768.1	4	—15.6	87	N	8	3.6	.....	.....	10n	.....	.....	0.20	5.1	Light snow	
Detroit, Mich.	.....	.....	30.29	769.4	14	—10.0	81	SW	6	2.7	.....	5cs	0	SW	.....	0	0	Fair	
Dodge City, Kan.	27.72	704.1	30.20	767.1	22	— 5.6	85	NE	23	10.3	.....	.....	10s	.....	.....	0	0	Cloudy	
Dubuque, Iowa	.....	.....	30.48	774.2	0	—17.8	69	Calm	0	0.	.....	0	2s	.....	.....	0	0	Fair	
Duluth, Minn.	.....	.....	30.44	773.2	— 6	—21.1	81	NW	2	0.9	.....	0	0	.....	.....	0	0	Clear	
Eastport, Me.	.....	.....	30.36	771.1	22	— 5.6	72	Calm	0	0	.....	.....	10s	.....	.....	0	0	Cloudy	
Erie, Pa.	.....	.....	30.28	769.1	23	— 5.0	86	S	12	5.4	.....	Haz	2s	.....	SW	0	0	Fair	
Escanaba, Mich.	.....	.....	30.28	769.1	7	—13.9	77	W	5	2.2	.....	0	5s	.....	.....	Inap.	Inap.	Fair	
Fort Gibson, Indian Ter.	.....	.....	30.27	768.8	37	2.8	37	NE	9	4.0	.....	.....	10s	.....	.....	0	0	Cloudy	
Ft. St. Michael, Alaska	29.06	738.1	30.25	768.3	30	— 1.1	59	N	7	3.1	.....	5ck	0	W	.....	0	0	Fair	
Fort Sill, Indian Ter.	28.75	730.2	30.68	779.3	— 4	—20.0	82	NW	8	3.6	.....	0	0	.....	.....	0	0	Clear	
Fort Sully, Dakota	28.47	723.1	30.01	762 2	49	9.4	.....	W	.....	.....	.....	0	0	.....	.....	0	0	Clear	
Florence, Arizona	.....	.....	30.12	765.0	46	7.8	92	N	14	6.3	.....	.....	10s	.....	.....	0.98	24.9	Cloudy	
Galveston, Tex.	.....	.....	30.29	769.4	23	— 5.0	79	NW	23	10.3	.....	0	5s	.....	NW	0.01	0.3	Fair	
Grand Haven, Mich.	.....	.....	30.38	772.6	26	— 3.3	76	NW	7	3.1	.....	.....	10s	.....	.....	Inap.	Inap.	Cloudy	
Indianapolis, Ind.	.....	.....	30.09	764.3	45	7.2	92	N	15	6.7	.....	.....	10s	.....	N	0	0	Cloudy	
Indianola, Tex.	.....	.....	30.10	764.5	67	19.4	94	S	9	4.0	.....	5ck	0	SW	.....	0.07	1.8	Fair	
Jacksonville, Fla.	.....	.....	30.44	773.2	15	— 9.4	82	NW	4	1.8	.....	0	5s	.....	NW	0	0	Fair	
Keokuk, Iowa	.....	.....	30.15	765.8	75	23.9	85	SE	8	3.6	.....	0	0	.....	.....	0	0.	Clear	
Key West, Fla.	.....	.....	30.13	765.3	41	5.0	100	N	20	8.9	.....	.....	Fog	.....	.....	0.39	9.9	Foggy	
Kittyhawk, N. C.	.....	.....	30.34	768.1	34	1.1	70	NW	12	5 4	.....	.....	10n	.....	.....	0.31	7.9	Light rain	
Knoxville, Tenn.	.....	.....	30.41	772.4	5	—15.0	64	SW	4	1.8	.....	0	0	.....	.....	0.04	1.0	Clear	
La Crosse, Wis.	.....	.....	30.48	774.2	21	— 6.1	71	N	12	5.4	.....	.....	10s	.....	N	0	0	Cloudy	
Leavenworth, Kan.	.....	.....	30.34	770.6	29	— 1.7	77	N	8	3.6	.....	.....	10s	.....	NW	0	0.	Cloudy	
Louisville, Ky.	.....	.....	30.24	768.1	34	1.1	90	NE	1	0.4	.....	.....	10n	.....	.....	0.21	5.3	Light rain	
Lynchburg, Va.	.....	.....	30.23	767.8	17	— 8.3	84	SE	5	2.2	.....	.....	10s	.....	S	0	0.	Cloudy	
Malone, N. Y.	.....	.....	30.23	767.8	7	—13.9	77	W	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Marquette, Mich.	.....	.....	30.29	769.4	34	1.1	79	NE	8	3.6	.....	.....	10s	.....	SW	0	0	Cloudy	
Memphis, Tenn.	.....	.....	30.39	771.9	7	—13.9	77	W	12	5.4	.....	0	0	.....	.....	0	0	Clear	
Milwaukee, Wis.	.....	.....	30.09	764.3	51	10.6	93	N	6	2.7	.....	.....	10s	.....	.....	2.87	72.9	Cloudy	
Mobile, Ala.	.....	.....	30.12	765.0	52	11.1	93	NE	4	1.8	.....	.....	Fog	.....	.....	0.98	24.9	Foggy	
Montgomery, Ala.	.....	.....	30.32	770.1	30	— 1.1	89	Calm	0	0	.....	.....	10s	.....	.....	0	0	Threatening	
Morgantown, W. Va.	29.21	741.9	30.02	762.5	5	—15.0	75	NW	50	22.4	.....	8s	0.	NW	.....	0	0	Fair	
Mt. Washington, N. H.	23.66	601.0	30.26	768.6	35	1.7	70	N	6	2.7	.....	0	8s	.....	W	0	0	Cloudy	
Nashville, Tenn.	.....	.....	30.33	770.4	26	— 3.3	75	Calm	0	0	.....	.....	10n	.....	.....	Inap.	Inap.	Light snow	
New Haven, Conn.	.....	.....	30.35	770.9	26	— 3.3	88	Calm	0	0	.....	.....	10n	.....	.....	Inap.	Inap.	Light snow	
New London, Conn.	.....	.....	30.11	764.8	55	12.8	93	N	7	3.1	.....	.....	10n	.....	.....	1.47	37.3	Light rain	
New Orleans, La.	.....	.....	30.34	770.6	27	— 2.8	88	E	9	4.0	.....	.....	10n	.....	NE	Inap.	Inap.	Light snow	
Newport, R. I.	.....	.....	30.34	770.6	26	— 3.3	88	NE	4	1.8	.....	.....	10n,fg	.....	.....	0.07	1.8	Light snow	
New York, N. Y.	.....	.....	30.18	766.6	33.5	0.8	95	NE	16	7.2	.....	.....	10n	.....	NE	0.65	16.5	Light rain	
Norfolk, Va.	.....	.....	30.40	772.1	2.5	—16.4	86	NW	6	2.7	.....	.....	10s	.....	.....	0.03	0.8	Cloudy	
North Platte, Neb.	27.48	698.0	30.58	776.7	9	—12.8	67	NW	12	5.4	.....	Haz	8s	.....	.....	0	0	Cloudy	
Omaha, Neb.	29.36	745.7	30.28	769.1	15	— 9.4	83	SE	4	1.8	.....	.....	10s	.....	SW	0	0	Cloudy	
Oswego, N. Y.	.....	.....	30.47	773.9	—18	—27.8	67	W	8	3.6	.....	0	0.	.....	.....	0	0	Clear	
Pembina, Dakota	.....	.....	30.33	770.4	23	— 5.0	86	E	8	3.6	.....	.....	10n	.....	E	0.06	1.5	Light snow	
Philadelphia, Pa.	.....	.....	29.55	750.6	— 8.3	—22.0	100	SW	6	2.7	.....	.....	10n	.....	SW	0.04	1.0	Light snow	
Pike's Peak, Col.	17.34	440.4	30.31	769.9	26	— 3.5	88	W	3	1.3	.....	.....	10s	.....	W	0.02	0.5	Cloudy	
Pittsburgh, Pa.	.....	.....	30.27	768.8	12	—11.1	80	SW	7	3.1	.....	Haz	1s	.....	.....	0.	0	Clear	
Port Huron, Mich.	.....	.....	30.35	770.9	20	— 6.7	100	Calm	0	0	.....	.....	10s,ha	.....	.....	0.	0	Hazy	
Portland, Me.	.....	.....	30.20	767.1	33	0.4	80	SE	12	5.4	.....	0	0	.....	.....	0	0	Clear	
Port'and, Oregon	.....	.....	30.17	766.3	71.5	21.1	95	SE	11	4.9	.....	0	5s	.....	SE	Inap.	Inap.	Fair	
Punta Rassa, Fla.	.....	.....	30.24	768.1	18	— 7.8	61	SW	6	2.7	.....	2ck	5s	W	W	0	0	Fair	
Rochester, N. Y.	.....	.....	30.24	768.1	18	— 7.8	83	NW	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Salt Lake City, Utah	25.75	654.0	30.08	764.0	17	— 8.3	83	NW	4	1.8	.....	.....	10n	.....	.....	0.04	1.0	Heavy snow	
Sandy Hook, N. J.	.....	.....	30.29	769.4	26	— 3.3	88	NE	12	5.4	.....	.....	2s	.....	.....	0	0	Clear	
San Diego, Cal.	.....	.....	30.03	762.7	53	11.7	80	Calm	0	0	.....	0	5s	.....	.....	0.01	0.3	Fair	
San Francisco, Cal.	.....	.....	29.90	761.7	49	9.4	77	SE	4	1.8	.....	Haz	8s	.....	.....	0	0	Fair	
Santa Fe, N. M.	23.10	586.7	29.64	752.8	22	— 5.6	72	SE	4	1.8	.....	0.	8s	.....	.....	0.13	3.3	Foggy	
Savannah, Ga.	.....	.....	30.10	764.5	64	17.8	94	SW	6	2.7	.....	.....	Fog	.....	.....	0.04	1.0	Cloudy	
Shreveport, La.	.....	.....	30.26	768.6	36	2.2	80	NE	6	2.7	.....	.....	10s	.....	N	0.94	23.9	Cloudy	
Smithville, N. C.	.....	.....	30.10	764.5	53	11.7	100	N	2	0.9	.....	.....	10s,fg	.....	.....	0	0	Cloudy	
Springfield, Mass.	.....	.....	30.35	770.9	23	— 5.0	72	Calm	0	0	.....	.....	10s	.....	.....	0	0	Fair	
St. Louis, Mo.	.....	.....	30.42	772.7	26	— 3.3	75	NE	12	5.4	.....	0	5s	.....	.....	0	0	Fair	
St. Marks, Fla.	.....	.....	30.10	764.5	62	16.7	100	S	8	3.6	.....	.....	Fog	.....	.....	0.03	0.8	Foggy	
St. Paul, Minn.	.....	.....	30.48	774.2	— 7	—21.7	80	NW	8	3.6	.....	0	0	.....	.....	Inap.	Inap.	Clear	
St. Paul's Island, Alaska	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Thatcher's Island, Mass.	.....	.....	30.34	770.6	29	— 1.7	67	Calm	0	0	.....	.....	10s	.....	SW	0	0	Cloudy	
Toledo, Ohio	.....	.....	30.31	769.9	24	— 4.4	80	SW	6	2.7	.....	2cs	Haze	SW	.....	0	0	Hazy	
Tucson, Arizona	27.07	702.8	30.22	767.6	27	— 2.8	.....	S	.....	.....	.....	0	0	.....	.....	0	0	Clear	
Tybee Island, Ga.	.....	.....	30.08	764.0	61	16.1	100	S	8	3.6	.....	.....	Fog	.....	.....	0.78	19.8	Foggy	
Vicksburg, Miss.	.....	.....	30.23	767.8	37	2.8	95	NE	6	2.7	.....	.....	10s,sm	.....	NE	0.40	10.2	Cloudy	
Virginia City, M. T.	24.42	620.3	29.90	759.4	—12	—24.4	.....	Calm	0	0	.....	0	0	.....	.....	0.02	0.5	Clear	
Washington, D. C.	.....	.....	30.31	769.9	28	— 2.2	94	N	4	1.8	.....	.....	10n	.....	N	0.34	8.6	Rain & Sleet	
Wilmington, N. C.	.....	.....	30.09	764.3	49	9.4	100	N	6	2.7	.....	.....	Fog	.....	.....	0.52	13.2	Foggy	

UNITED STATES SERIES.—CONTINUED.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Upper. 0—10.	Clouds. Amount. Low'r. 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Wood's Holl, Mass.	.....	.....	30.36	771.1	28	— 2.2	88	N	5	2.2	.....	.....	10s	.....	.....	0	0	Cloudy.....	
Yankton, Dakota	29.21	741.9	30.71	780.0	— 2	—18.9	67	NW	8	3.6	.....	0	0	.....	.....	Inap.	Inap.	Clear.....	
Yuma, Arizona	.....	.....	30.03	762.7	57	13.9	.....	N	.....	.....	.....	0	0	.....	.....	0	0	Clear.....	
Sub-Series.																			
Kingston, Jamaica, W. I.	.....	.....	30.26	768.6	76	24.4	72	SE	9	4.0	.....	2c	2s	SE	.....	0	0	.....	James Gall.
Navassa, W. I.	.....	.....	.....	.....	79	26.1	.....	E	.....	.....	3	.....	.....	.....	.....	0	0	Cloudy.....	F. M. Everett.
Clifton, Ja., W. I.	27.23	691.6	30.02	762.5	64	17.8	78	NE	3.0	1.3	.....	2c	0	NE	.....	0	0	Fine.....	C. Partridge.
Paramaribo, D. Guiana, S.A	.....	.....	30.07	763.8	78	25.6	86	E	.....	.....	3	5k	6ks	E	.....	0.09	2.2	½ cloudy....	C. J. Hering.
Batavia, Dutch Guiana, S.A	30.07	763.8	.....	.....	78 8	26	.....	N	.....	.....	.....	.....	.....	.....	.....	0	0	Cloudy.....	Dr. H. Groot.
Medellin, Colombia, S. A.	25.24	641 1	.....	.....	66 5	19.2	80	Calm	.....	.....	0	1cs	2s,ks	.....	.....	0	0	Fair.....	Thomas Herran.
York Factory, B. A.	.....	.....	29.70	754.4	—11.0	—23.9	76	W	14	6.3	.....	.....	9s	.....	.....	0.06	1.5	Snowing.....	J. Fortescue, W. Wood.
Honolulu, Oahu, H. I.	.....	.....	30.09	764.3	65	18.3	94	N	.....	.....	2	.....	.....	.....	.....	0	0	Very clear..	Daniel Smith.
Makawao, Maui, H. I.	.....	.....	29.91	759.7	50	10.0	77	Calm	.....	.....	0	0	0	.....	.....	0	0	.....	F. L. Clarke.

NOTE.—The originals give the amount of cloudiness by the scale 0 to 4, except York Factory, Makawao, Medellin and Paramaribo. The elevation of the barometer at Bismarck is 1,677 feet, or 511.1 meters; Cheyenne, 6,057.3 ft., or 1,846.2 m.; Clifton, about 2,892 ft., or 881.5 m.; Denver, 5,135 ft., or 1,565.2 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Florence, 1,570 (?) ft., or 472.5 (?) m.; Makawao, 2,205 ft., or 672.1 m.; Morgantown, 1,027.9 ft., or 313.3 m.; Medellin, 4,876 ft., or 1,486.2 m.; Mt. Washington, 6,285 ft., or 1,915.6 m.; North Platte, 2,846 ft., or 867.4 m.; Omaha, 1,054.6 ft., or 321.4 m.; Pike's Peak, 14,150.7 ft., or 4,313.1 m.; Salt Lake City, 4,362.2 ft., or 1,329.6 m.; Santa Fé, 6,862.2 (?) ft., or 2,091.6 (?) m.; Tucson, 2,513 (?) ft., or 772.1 (?) m.; Virginia City, 5,480 (?) ft., or 1,670.3 (?) m.; Yankton, 1,278 ft., or 389.5 m. The following constants are added in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Denver, 5.22 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fe, 6.54 in.; Tucson, 2.73 in.; Virginia City, 5.48 in. The elevation of Batavia is about 6 feet; the barometric readings need the addition of 0.2 mm. or 0.01 in. for reduction to sea-level.

UNITED STATES NAVAL SERIES.

By authority of the **SECRETARY OF THE NAVY.**

Furnished by the coöperation of the Navy Department, through Commodore Daniel Ammen, U. S. N., Chief of Bureau of Navigation.

STATIONS AND VESSELS.	True course toward—	Hourly rate in knots.	*Barometer as reported.		Temperature of the Air.		Relative Humidity.	Wind.				Clouds.				Rain-fall or melted snow in the past 24 hours.		State of Ocean.	Direction of swell from—	Weather.	Observer.
								Direction.	Velocity		Force.	Amount.		Direction.							
												Up'er	Low'r	Up'er	Low'r						
			Inches.	Millimeters.	Fahrenheit.	Centigrade.	Per cent.	From—	Miles per hour.	Meters per second.	0—10.	0—10.	0—10.	From—	From—	Inches.	Millimeters.				
Naval Academy, Annapolis, Md.			29.93	760.2	28	— 2.2	84	N			5		10			0.32	8.1			Rain & sleet	
Naval Hospital, Annapolis, Md.			30.30	769.6	27	— 2.8	100	N			2		10		N	0.32	8.1			Rainy	
Navy Yard, Mare Island, Cal.			30.10	764.5	47	8.3	92	E			3		8		SW	0.020	0.51			Cloudy	
Navy Yard, Norfolk, Va.			30.28‡	769.1†	34	1.1		NNE			5		10n							Raining	
Navy Yard, Pensacola, Fla.			30.18	766.6	63.5	17.5	94	ESE			1		10			3.062	77.77			Raining	
NavyYard, Portsmouth, N.H.			30.30	769.6	20	— 6.7		W			1									Cloudy	
Adams, Port Royal, S. C.			30.14	765.5	61	16.1	94	S&W			1					0.35	8.9			Foggy	
Ajax, Port Royal, S. C.			30.08	764.0	58	14.4		SSE			1		10			Blank	Blank			Dense fog	
Canonicus, New Orleans, La.			29.85†	758.2†	53	11.7		NE			3		10							Rain & fog	
Catskill, Port Royal, S. C.			30.10‡	764.5†	59	15.0		S			1					Blank	Blank	Smooth		Foggy	
Colorado, New York, N. Y.			30.40	772.1	26	— 3.3		NNE			0–1		10			0.025	0.63			Snow & fog	
Dictator, Port Royal, S. C.			30.17	766.3	58	14.4	100	S			2–3		Fog			0.50	12.7			Foggy	
Essex, Norfolk, Va.			30.20	767.1	40	4.4	100	N			3		10							Overcast	
Hartford, Hampton Roads, Va.			30.32	770.1	34	1.1		NNE			4		10			0.75	19.1			Rainy	
Huron, Port Royal, S. C.			30.20	767.1	63	17.2	100	SSE			1–2		10							Foggy	
Lehigh, Port Royal, S. C.			30.95‡	786.1†	46	7.8	92	NE			2		10		SE					Raining	
Manhattan, Port Royal, S. C.			30.16‡	766.1†	58	14.4		S			2							Smooth		Dense fog	
Michigan, Erie, Pa.			30.15	765.8	20	— 6.7	85	SW			1		1							Clear	
Monongahela, Baltimore, Md.			30.32	770.1	28	— 2.2		NNE			2		...n							Hailing	
New Hampshire, Port Royal, S. C.			30.32	770.1	60	15.6	94	S			1		Fog			Blank	Blank	Smooth		Dense fog	
Ossipee, New Orleans, La.			30.15	765.8	57	13.9		N			2		10		S					Raining	
Plymouth, Pensacola, Fla.			30.09	764.3	69	20.6	80	S			1		10			1.3	33.0	Smooth		Heavy rain	
Santee, Annapolis, Md.			29.86	758.4	29	— 1.7		N			5		10							Rain & sleet	
St. Louis, League Island, Pa.			30.15	765.8	28	— 2.2		N			5		10		W	0.038	0.97			Snowing	
Tallapoosa, Washington, D. C.			30.18	766.6	30	— 1.1	100	NE			1		10							Rain & hail	
Wabash, Boston, Mass.			30.38	771.6	24.5	— 4.2		E			1		10							Misty	
Wyoming, Washington, D. C.			30 71‡	780.0‡	43	6.1		NNE			2		10							Raining	

* It is not known that the barometer is corrected for temperature, instrumental error or elevation. † Aneroid Barometer. ‡ Detached clouds.

UNITED STATES MARINE SERIES.

REPORTED TO THE OFFICE OF THE CHIEF SIGNAL OFFICER OF THE ARMY.

NAMES OF VESSELS.	True course toward—	Hourly rate in knots.	Barometer reduced to sea-level.		Temperature of the Air.		Relative Humidity.	Wind.				Clouds.				State of Ocean.	Direction of swell from—	Weather.	Observer.
								Direction.	Velocity.		Force.	Amount.		Direction.					
												Up'er	Low'r	Upper.	Lower.				
			Inches.	Millimeters.	Fahrenheit.	Centigrade.	Per cent.	From—	Miles per hour.	Meters per second.	0—10.	0—10.	0—10.	From—	From—				

PACIFIC MAIL S. S. CO. MARINE SERIES.

Furnished by the coöperation of ————, President; Williams, Blanchard & Co., Agents.

OCCIDENTAL AND ORIENTAL S. S. CO. MARINE SERIES.

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S. S. Belgic																				Capt. John Metcalf.
S. S. Gaelic																				Capt. W. H. Kidley.
S. S. Oceanic																				Capt. H. Parsell.

NORTH GERMAN LLOYD OF BREMEN MARINE SERIES.

Furnished by the coöperation of A. Schumacher & Co., Agents.

Steamer Nürnberg, N. 42°, 44′, W. 49°, 27′	WSW ¾ W		30.40	772.1	36.5	2.5		NW			3–4		c		NW	Swell.	W	Clearing		Capt. A. Jaeger.

MARINE SERIES. (Miscellaneous.)

Furnished by the coöperation of Captain James Jorgensen.

Schooner Addie Fuller, N. 33°, 00′, W. 77°, 49′	SSE	1	30.01	762.2	72	22.2	85	SW	12	5.4		2ck	5ks	W	SW	Rough.		Squally		Capt. James Jorgensen.

NOTE.—The schooner Addie Fuller gives the amount of cloudiness by the scale 0 to 4.

COLLATED AT THE OFFICE OF THE CHIEF SIGNAL OFFICER OF THE ARMY, WASHINGTON, D. C.

The records which appear in this Bulletin are copied from the regular exchanges of this office, made in each instance in compliance with an especial request and are published for the uses of the coöperating observers. The barometric readings in the first two columns are reduced to freezing and their respective standards; those in the second two also to mean sea-level. The "weather" is generally published as given.

When the distinction between the upper and lower strata of clouds is not reported, the *kinds* or *types*, viz: cirrus, cumulus, stratus, nimbus, scud, fracto, pallio, haze, fog and smoke, as indicated, respectively, by the letters c, k, s, n, d, f, p, hz., fg. and sm'e, are generally published with the amount in the lower-cloud column. The distinction between the upper and lower strata is carefully made in the United States Series and a portion of the Canadian Series, and the types are indicated by the above letters or their combinations in the proper column.

Albert J. Myer

Brig. Gen. (Bvt., Asst'g.) Chief Signal Officer, U. S. A

BULLETIN

OF

INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON JANUARY 23, 1877.

7:35 A. M. WASHINGTON mean time.

6:7 A. M. MEXICO mean time.
7:7 A. M. SAN JOSE mean time.
0:6 P. M. LISBON mean time.
0:28 P. M. MADRID mean time.
0:43 P. M. GREENWICH mean time.
0:58 P. M. PARIS mean time.
1:1 P. M. BRUSSELS mean time.
1:4 P. M. UTRECHT mean time.
1:13 P. M. BERNE mean time.

10:2 P. M. TOKEI mean time.

1:26 P. M. CHRISTIANIA mean time.
1:33 P. M. COPENHAGEN mean time.
1:33 P. M. ROME mean time.
1:37 P. M. BERLIN mean time.
1:49 P. M. VIENNA mean time.
1:55 P. M. STOCKHOLM mean time.
2:18 P. M. ATHENS mean time.
2:39 P. M. CONSTANTINOPLE mean time.
2:44 P. M. ST. PETERSBURG mean time.

ALGERIAN SERIES.

Furnished by the coöperation of General d'Eudeville, Commandant Supérieur du Génie in Algeria.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Nemours			30.34	770.6	59.2	15.1	68	ENE			1		0			0	0	Clear	Charnot.
Algiers			30.34	770.7	55.0	12.8		N			1		9			Inap.	Inap.	Hidden	Peter.
La Calle			30.05	763.3	55.8	13.2	62	NW			3		5			0.276	7.0	Fair	Fleury.
Tunis			30.03	762.7	51.8	11.0		NE			6		7			0.354	9.0	Cloudy	Jacques.
Sfax																			
Saida			30.28	769.0	51 8	11.0	52	S			2		1			0	0	Clear	Millot.
Tebessa			30.16	766.1	54.7	1.5		NW			3		10			0	0	Hidden	Bourgeois.
Gerlville			30.17	766.2	51.8	11.0	12	SSW			3		0			0	0	Clear	Lemaillot.
Laghouat			30.10	764.6	54.5	12.5	33	E			1		0			0	0	Clear	Guyot.
Biskra			30.17	766.2	60.6	15.9	52	NW			2		5			0	0	Fair	Kuntz.

NOTE.—In the originals the distinction between the amount of upper and lower clouds is apparently not made. The weather is published as given. The rain-fall is measured at 7 a. m., local time.

AUSTRIAN SERIES.

Furnished by the cooperation of Professor Ferdinand Osnaghi, Director of the Imperial and Royal Central Meteorological Institute at Vienna.

Agram			30.35	771.0	37.2	2.9	74	SW			2		9			0	0		Prof. Ivan Stozir.
Cracow, I. R. Observatory			30.43	772.9	28.8	— 1.8	100	W			1		10			0.035	0.9		Dr. Wierzbiski.
Eperies			30.32	770.2	32.0	0.0	81	N			1		9k,s		S	0	0		Julius Mikolik.
Gratz																			Andreas Rospini.
Hermannstadt	29.08	738 6	30.38	771.7	40.6	4.8	49	NW			4		6			0	0		Prof. Reissenberger
Kremsmünster	28.78	731.0	30.31	769.8	25.7	— 3.5	69	E			1		0			0	0		Prof. C. Wagner.
Lemberg	29.10	739.2	30.54	775.7	28.9	— 1.7	90	NW			2		10			0	0		Dr. T. Stanecki.
Nyiregyhaza			30.32	770.0	27 3	— 2.6	98	NW			1		10			0.118	3 0		Habasuda Daniel.
Pola																			I.R.Hydrographic Office.
Szegedin			30.24	768.2	46.6	8.1	44	NE			4		4cs			0	0		Karl Stancel.
Trieste			30.32	770.0	32.9	0.5	87	Calm			0		0			0	0		Prof. V. Farolfi.
Vienna			30.32	770.1	44.6	7.0	39	ENE			1		0			0	0		I. R. Central Met. Obs'y.
			30.47	773.0	32.0	0.0	79	NW			2		4			0	0		

NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 7 p. m., local time. The elevation of Gratz is 343.5 meters, or 1,126.9 feet; Hermannstadt, 407.8 meters, or 1,337.9 feet; Kremsmünster, 383.6 meters, or 1,258.5 feet.

BELGIAN SERIES.

Furnished by the cooperation of J. C. Houzeau, Director of the Royal Observatory at Brussels.

Arlon			30.58	776.7	31.8	— 0.1	86	NNW			0		0			0	0		
Brussels			30.49	774.4	34.6	1.4	83	NNE			0		10			0	0	Foggy	Royal Observatory.
Furnes			30.47	773 9	35.8	2.1	83	S			2		10			0	0		
Maeseyck			30.52	775.2	31.8	— 0.1	97	SSW			0		0			0	0		

NOTE.—In the originals, the weather is occasionally given in general notes.

BRITISH SERIES

Furnished by the coöperation of Robert H. Scott, Esq., Director of the Meteorological Office, London, Alexander Buchan, Secretary of the Scottish Meteorological Society, Edinburgh, and the respective Observers.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Aberdeen			30.01	762.2	42.0	5.6		S	22	9.8			3			0	0	Blue sky	William Boswell.
Ardrossan			30.00	762.0	47	8.3		S			5		8					Overcast	William McNeil.
Armagh, Observatory			29.91	759.7	48.0	8.9		S	28	12.5			10					Raining	S. Call, for Dr. Robinson.
Birr Castle, (Parsonstown)			29.89	759.2	49.2	9.6		SE			3-4		10					Raining	J. Dreyer.
Bradford			30.18	766.6	48.3	9.1		S			3		2			0	0	*D. clouds	J. McLandsborough.
Bridgetown, (Barbados)			30.07	763.8	78.5	25.8		NE			2		4?					Overcast?	Sergt. J. F. Halanen, A. H.Todd. [H.C.
Cambridge, Observatory			30.37	771.4	44.5	6.9		SSE			1		1					Blue sky	
Cardington			30.37	771.4	42.0	5.6		S			1		1					Blue sky	John McLaren.
Carlisle																			T. Bell, for J. Cartmell.
Chatham, School M. E			30.84?	783.3?	43.2	6.2		Calm			0		2					Blue sky	Maj. C. N. Martin, R.E.
Dartmoor	28.75	730.2	30.29	769.4	46.0	7.8		E			4		6					*D. clouds	R. E. Power.
Davos Platz, (Switzerland)	25.04	636.0			24.6	— 4 1	36	Calm			0		4			0	0	Hazy	Francis Redford, M. A.
Donaghadee			29.95	760.7	47	8.3		SSW			6		10					Overcast	J. Mac Gowan.
Dover			30.44	773.2	44	6.7		S			3		0					Clear	J. Costello.
Eccles, (near Manchester)			30.19	766.8	47.0	8.3		SSW	3.2	1.4			5					*D. clouds	Thomas Mackereth.
Falmouth, Observatory			30.21	767.3	49.5	9.7		SSE			6		9					Overcast	The Staff.
Fort Napier, (Natal)	27.70	703.6	29.94	760.5	73.3	22.9		NE			2		10					Overcast	P'vt. G.Salmon, A. H. C
Free Town, (Sierra Leone)			29.90	759.4	85	29.4		Calm			0		3					*D. clouds	
Galway, Queen's College			29.72	754.9	47	8.3		S			6		10					Raining	Prof. A. H. Curtis.
Gibraltar, (Mediterranean)			30.23	767.8	62.5	16.9		E			4		3					*D. clouds	Corpl. C. Aitken, A.H.C.
Glasgow, Observatory			30.00	762.0	45.2	7.3		S			2		10					Overcast	Lewis Stuart.
Great Yarmouth			30.41	772.4	43	6.1		S			3		2					Blue sky	G. T. Watson.
Greenwich, Royal Obs'y			30.39	771.9	45.9	7.7		SSE			1		0					Blue sky	The Staff, for G. B. Airy.
Guernsey			30.31	769.9	46.5	8.1		SSE			4		3					*D. clouds	Dr. S. E. Hoskins.
Helston			30.22	767.6	49	9.4		S			6		2ck			0	0	Fine	M. P. Moyle.
Holyhead			30.05	763.3	47	8.3		S			6		4					*D. clouds	John Tilston.
Kew, Observatory			30.39	771.9	45.0	7.2		S	14	6.3			1					Hazy	The Staff.
Kingstown			30.01	762.2	49	9.4		SSE			5		10					Drizzling	George Mitchell.
Leicester Museum			30.30	769.6	46.5	8.1		SE			2		0					Blue sky	Wm. J. Harrison, F.G.S.
Malta, (Mediterranean)			29.96	761.0	55.0	12.8		N			4		6k					*D. clouds	Corp't. P.Bravis, A.H.C.
Nairn			29.86	758.4	48	8.9		SW			3		10					Overcast	W. D. Penny.
Nassau, (Bahamas)			30.24	768.1	75	23.9		NE			0		2					*D. clouds	Surg. Maj. Henry.
Nottingham, Observatory			30.30	769.6	48.2	9.0		SSW			3		2c		W	0	0	Blue sky	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			30.26	768.6	47.1	8.4		S			6		2					*D. clouds	Rev. Stephen Whitty.
Oxford, Radcliffe Obs'y			30.33	770.4	44	6.7		S			1		1					Blue sky	J. Lucas.
Plymouth			30.26	768.6	48.9	9.4		ESE			4		7					*D. clouds	John Merrifield.
Roche's Point			29.94	760.5	51	10.6		S			6		10					Raining	W. Kennedy.
Saint Ann's Head			30.14	765.5	49	9.4		S			7		7					*D. clouds	John C. Walker.
Saint Helier, (Jersey)			30.34	770.6	48.0	8.9		SSE			3		0					Clear	A. P. Amy.
Sandwick Manse, (Orkneys)			29.85	758.2	41.9	5.5		SSE	34	15.2			3					*D. clouds	Rev. C. Clouston, LL. D.
Scarborough																			F. Shaw.
Scutari Cemetery, (Turkey)			29.95	760.7	42.0	5.6		NE			3		10					Raining	Sergt. W. H. Lyne.
Sheffield			30.25	768.3	44.2	6.8		SW			5		1			0.056	1.42	Blue sky	W. F. Cooper.
Silloth Rectory			30.08	764.0	47.3	8.5	59	SW			4		0			0.170	4.32	Blue sky	Rev. Francis Redford.
Stonyhurst, Observatory			30.20	767.1	42.7	5.9		S			2		3					Blue sky	Rev. S. J. Perry.
Stornoway, Lews C., (Hebr.)			29.69	754.1	47	8.3		S			7		10					Overcast	John Smith.
Stratfield Turgiss			30.36	771.1	47.0	8.3		S			1		0					Blue sky	Rev. Charles H. Griffith.
Thurso			29.81	757.2	47	8.3		SSE			5		7					*D. clouds	John Trotter.
Truro, Royal Institution			30.19	766.8	52	11.1		S			5		7					Gloomy	W. Newcombe.
Valencia, Observatory			29.78	756.4	51.5	10.8		S	44	19.7			10					Drizzling	The Staff.
SUB-SERIES.																			
Calf of Man, (Isle of Man)					44	6.7		SSW			7		4			0	0		Henry Mercer.
Cape Good Hope, Obs'y			30.00	762.0	77.0	25.0	57	S	29	13.0		0	1						The Staff, for E.J. Stone.
Hobart Town, (Tasmania)			29.80	756.9	70.0	21.1	88	W			5		7ks			0.13	3.3	Aurora	Francis Abbott, F.R.A.S.
Leith, Restalrig Park			30.05	763.3	47.1	8.4		SW			3		8k			0	0	Fine	Andrew Gibb.
Mauritius, Observatory			29.96	761.0	86.0	30.0	53	NE	17.5	7.8		2	2		E	0	0	*D. clouds	C. Meldrum.
Melbourne, Observatory			30.18	766.6	59.9	15.5	77	SE	10	4.5			6		WSW	0	0	Fine	R. L. J. Ellery.
Monach L't-house, (Hebrides)			29.62	752.3	48	8.9		S			8		10			0.2	5.1		J. Youngclause.
North Unst, (Shetland Is.)			29.84	757.9	42	5.6		S			7	0	4						Robert Burnet.

NOTE.—Generally, the originals do not give the relative humidity, rain-fall, or distinction between upper and lower clouds. The originals give the wind direction to 32 points and weather by the Beaufort notation. The originals give the barometer for Aberdeen, Cardington, Galway, Oxford, St. Helier, Sandwick, Scarborough, Stonyhurst, Leith, Monach and North Unst as read off and the cloudiness for Stornoway by the scale 0 to 4. The wind-force is given by the scale 0 to 12 in the official series; 0 to 6 in the sub-series; except in lbs. per square foot for Greenwich and Hobart Town. The rain-fall is measured at Aberdeen at 10 a. m.; Bradford, 9 a. m.; Hobart Town, 7:30 a. m.; Nottingham, 6 p. m.; Mauritius, 9 a. m., local time. The elevation of Dartmoor is 1,400 feet, or 426.7 meters; Davos Platz, 5,105? feet, or 1,556.0? meters; Fort Napier, 2,200 feet, or 670.6 meters. *Detached clouds.

By authority of the
MINISTER OF FOREIGN AFFAIRS.

COSTA RICA SERIES.

Furnished by the coöperation of Senor Federico Maison, Director of the Central Office of Statistics and Meteorology.

San José																			

DANISH SERIES.

Furnished by the co peration of Captain N. Hoffmeyer, Director of the Royal Danish Meteorological Institute at Copenhagen.

Copenhagen			30.44	773.1	36.3	2.4	80	NW			2		5						
Fanöe			30.47	773.8	37.9	3.3	97	SSW			2		2						
Godthaab, (Greenland)			28.94	735.1	6.1	—14.4	87	Calm			0		10						
Stykkisholm, (Iceland)			28.93	734.7	28.9	— 1.7	96	S			2		10					Snowing	
Thorshavn, (Faröe)			29.48	748.8	48.4	9.1	88	S			6		10					Raining	
Vestervig			30.40	772.1	36.7	2.6	98	S			2		5						

NOTE.—The originals give the wind-force by the scale 0 to 6; occasionally, weather by Vienna symbols; no distinction between the amount of upper and lower clouds.

FRENCH SERIES.

Furnished by the co operation of His Excellency, U. J. Le Verrier, Director of the Paris Observatory, and the respective Observers.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Alengon	.....	.....	30.30	769.5	44.6	7	70	SW	.....	.....	3	.....	0	.....	.....	0	0	Clear	Normal School.
Amiens	.....	.....	30.48	774.2	34.5	1.4	74	NW	.....	.....	3	.....	0	.....	.....	0	0	Clear	Normal School.
Avignon	.....	.....	30.34	770.5	46.0	7.8	51	N	.....	.....	2	.....	0	.....	.....	0	0	Very clear	Normal School.
Bar-sur-Seine	.....	.....	30.48	774.1	37.9	3.3	63	SW	.....	.....	2	2c	.....	.....	.....	0	0	Slightly cl'dy	C. Saillard.
Beaumette, (near Angers)	.....	.....	30.36	771.1	40.3	4.6	67	E	3.1	1.4	.....	.....	.....	.....	N	0	0	.....	Beaumette Observ'tory.
Beauvais	.....	.....	30.50	774.6	31.6	— 0.2	96	SSE	.....	.....	1	.....	0	.....	.....	0	0	Clear	Normal School.
Besangon	.....	.....	30.48	774.3	35.6	2	89	E	.....	.....	4	.....	0	.....	.....	0	0	Clear	Normal School.
Bourg en Bresse	.....	.....	30.51	774.9	28.8	— 1.8	92	WSW	.....	.....	1	.....	.....	.....	.....	0	0	Foggy	Normal School.
Bourges	.....	.....	30.46	773.6	37.0	2.8	66	NE	.....	.....	2	.....	2	.....	NE	0	0	Slightly cl'dy	Normal School.
Brest	.....	.....	30.21	767.2	48.7	9.3	71	S	.....	.....	4	.....	5s	.....	S	0	0	.....	Naval Observatory.
Carcassonne	.....	.....	30.32	770.2	48.6	9.2	60	NE	.....	.....	.....	.....	0	.....	.....	0	0	Clear	Normal School.
Caen	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Chartres	.....	.....	30.46	773.7	41.4	5.2	77	E	.....	.....	1	.....	1	.....	NW	0	0	.....	Normal School.
Châlons-sur-Marne	.....	.....	30.40	772.1	36.5	2.5	69	E	.....	.....	1	.....	0	.....	.....	0	0	Clear	Normal School.
Clermont	.....	.....	30.42	772.7	37.6	3.1	60	SW	.....	.....	1	.....	0	.....	.....	0	0	Clear	Puy de Dome Obs'y.
Commercy	.....	.....	30.53	775.5	29.5	— 1.4	78	E	.....	.....	1	.....	5ks	.....	NE	0	0	Cloudy	Normal School.
Commune de Gréasque*	.....	.....	30.32	770.0	50.0	10.0	39	NW	.....	.....	1	.....	0	.....	.....	0	0	.....	M. Kina.
Grenoble	.....	.....	30.36	771.2	39.6	4.2	70	ESE	.....	.....	1	.....	2ks	.....	SE	0	0	Slightly cl'dy	Normal School.
La Roche-sur-Yon	.....	.....	30.40	772.2	45.3	7.4	55	NE	.....	.....	1	.....	1	.....	N	0.008	0.2	Slightly cl'dy	Normal School.
Le Mans	.....	.....	30.41	772.5	39.2	4	67	E	.....	.....	3	.....	0	.....	.....	0	0	Clear	Normal School.
Lons-Le-Saulnier	.....	.....	30.45	773.4	31.3	— 0.4	97	SE	.....	.....	1	.....	10	.....	.....	0	0	Covered	Normal School.
Lorient	.....	.....	30.34	770.7	45.7	7.6	43	SE	.....	.....	4	.....	0	.....	.....	0	0	Clear	Naval Observatory.
Mâcon	.....	.....	30.55	776.0	32.0	0	.....	N	.....	.....	2	.....	10	.....	.....	0	0	Covered	Normal School.
Metz	.....	.....	30.57	776.5	28.4	— 2.0	72	NE	.....	.....	3	.....	5	.....	NE	0	0	.....	M. Schuster.
Mirecourt	.....	.....	30.50	774.8	31.6	— 0.2	85	N	.....	.....	2	.....	2	.....	S	0	0	Slightly cl'dy	Normal School.
Nismes	.....	.....	30.35	770.8	49.6	9.8	56	N	.....	.....	4	.....	0	.....	.....	0	0	Clear	Normal School.
Orleans	.....	.....	30.44	773.2	37.4	3	96	E	.....	.....	1	.....	0	.....	.....	0	0	Clear	Normal School.
Paris, Observatory	.....	.....	30.48	774.1	36.0	2.2	63	SE	.....	.....	1	.....	0	.....	.....	0	0	Clear	National Observatory.
Parthenay	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Privas	.....	.....	30.40	772.2	41 0	5	.....	SE	.....	.....	2	.....	2	.....	SE	0	0	Slightly cl'dy	Normal School.
Rochefort, Observatory	.....	.....	30.33	770.4	47.1	8.4	55	ENE	.....	.....	4	.....	0	.....	.....	0	0	Clear	Naval Observatory.
Rouen	.....	.....	30.46	773.6	38.8	3.8	63	ENE	.....	.....	2	.....	0	.....	.....	0	0	Clear	Normal School.
Saint Lo	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Tarbes	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Villefranche	29.17	740.8	30.28	769.0	46.4	8	81	E	.....	.....	2	.....	0	.....	.....	0	0	Clear	Normal School.
	.....	.....	30.56	776.1	33.8	1	96	NNE	.....	.....	2	.....	10	.....	.....	0	0	Covered	Normal School.
SUB-SERIES.																			
Fort de France, Martinique	.....	.....	29.93	760.1	77.0	25	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	L'Abbé Marchési.
Marseilles	.....	.....	30.27	768.8	55.0	12.8	27	NW	.....	.....	1	.....	0	.....	.....	0	0	Clear	Marseilles Observatory.
Mont-Louis	24.99	634.8	30.31	769.8	36.3	2.4	56	SSW	14.9	6.66	.....	.....	0	.....	.....	0	0	.....	—, Falguère.
Montsouris, Paris	.....	.....	30.45	773.5	37.4	3.0	.....	SE	.....	.....	2	.....	0	.....	.....	0	0	.....	Montsouris Observatory
Perpignan	.....	.....	30.35	770.8	46.8	8.2	67	E	3.7	1.67	.....	.....	1	.....	NW	0	0	.....	Dr. Fines.
Pic du Midi, (Summit,) H. P.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. Baylac.
Pic du Midi, (Plantade,) H. P.	22.57	573.4	.....	.....	33.8	1.0	.....	N	.....	.....	1	.....	0	.....	.....	0	0	Clear	General de Nansouty.
Saint Maur, (near Paris)	.....	.....	30.46	773.7	39.9	4.4	62	E	.....	.....	1	.....	0	.....	.....	0	0	Clear	E. Renou.
Toulouse	.....	.....	30.34	770.6	43.3	6.3	70	SE	.....	.....	1	.....	0	.....	.....	0	0	.....	Toulouse Observatory.
Tours	.....	.....	30.41	772.4	37.8	3.2	85	ESE	.....	.....	2	.....	0	.....	.....	0	0	Clear	C. Marquet.
Versailles, (near Paris)	.....	.....	30.44	773.2	38.5	3.6	70	SE	.....	.....	1	.....	0	.....	.....	0.016	0.40	Very clear	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai)	.....	.....	30.18	766.5	46.6	8.1	95	WNW	13.0	5.83	.....	.....	10	.....	.....	0.118	3.0	Rainy	Marc Dechevrens, S. J.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—Generally, the originals give the wind-force by the scale 0 to 7; no distinction between upper and lower clouds, and, in the official series, the amount by the scale 0 to 4; the rain-fall as measured at 7, 8 or 9 a. m., local time; at Clermont, 9 a. m. of the following day; the weather in general terms as published. The elevation of Clermont is 388 meters, or 1,272.9 feet; Commune de Gréasque, 322 meters, or 1,056.4 feet; Tarbes, 308 meters, or 1,010 feet; Mont-Louis, 1,580.40 meters, or 5,208.8 feet; Pic du Midi, (Summit,) 2,877 meters, or 9,439.1 feet; Pic du Midi, (Plantade,) 2,366 meters, or 7,762.6 feet. In correcting the Mont-Louis barometric observations for altitude, the constant 135. millimeters has been added. *Bouches-du-Rhône

GERMAN SERIES.

Furnished by the coöperation of Professor Dr. G. Neumayer, Director of the German Naval Observatory, Hamburg.

Bamberg	.....	.....	30.48	774.3	32.0	0.0	94	Calm	.....	.....	0	.....	10	.....	.....	0	0	.....	Prof. T. Hoh.
Berlin	.....	.....	30.50	774.7	37.9	3.3	87	W	.....	.....	1	.....	10	.....	.....	0.008	0.2	.....	Prof. Arndt.
Breslau	.....	.....	30.43	773.0	32.2	0.1	96	WNW	.....	.....	2	.....	10	.....	.....	0.020	0.5	.....	Royal University Obs'y.
Carlsruhe	.....	.....	30.54	775.6	34.5	1.4	66	NE	.....	.....	1	.....	1	.....	.....	0	0	.....	A. Senz.
Cassel	.....	.....	30.56	776.1	34.3	1.3	77	N	.....	.....	2	.....	10	N	.....	0	0	.....	Dr. H. Möhl.
Crefeld	.....	.....	30.50	774.8	35.2	1.8	71	SE	.....	.....	3	.....	6	.....	.....	0	0	.....	Director Lose.
Emden	.....	.....	30.61	777.6	34.0	1.1	98	W	.....	.....	1	.....	10	.....	.....	0	0	.....	Prof. Prestel.
Frankfort on the Main	.....	.....	30.60	777.1	29.7	— 1.3	92	NW	.....	.....	1	.....	10	.....	.....	0	0	Foggy	Physical Society.
Friedrichshafen	29.04	737.5	30.56	776.3	31.5	— 0.3	89	ENE	.....	.....	5	.....	8	.....	.....	0	0	.....	M. Wilhelm.
Hamburg	.....	.....	30.53	775.4	33.4	0.8	96	WSW	.....	.....	4	.....	10	.....	.....	0.035	0.9	Dense fog	Captain F. Hegemann.
Kiel	.....	.....	30.49	774.5	33.3	0.7	98	W	.....	.....	1	.....	10	.....	.....	0.031	0.8	.....	Prof. G. Karsten.
Königsberg, (Prussia)	.....	.....	30.34	770.5	34.3	1.3	79	SW	.....	.....	2	.....	9	.....	.....	0.008	0.2	Snowing	Prof. E. Luther.
Köslin	.....	.....	30.44	773.1	34.5	1.4	.....	NW	.....	.....	2	.....	10	.....	.....	0	0	.....	H. Müller.
Leipsic	.....	.....	30.56	776.2	34.5	1.4	80	W	.....	.....	1	.....	9	WNW	.....	0.016	0.4	.....	Prof. Bruhns.
Memel	.....	.....	30.31	769.9	33.8	0.7	90	WNW	.....	.....	2	.....	10ks	N	.....	0.031	0.8	.....	Reinbrecht & Skalweit.
Münster	.....	.....	30.42	772.6	35.2	1.8	96	SE	.....	.....	1	.....	10	.....	.....	0	0	Foggy	Prof. E. Heis.
Neufahrwasser	.....	.....	30.37	771.5	35.2	1.8	82	NW	.....	.....	1	.....	4	NW	.....	0	0	.....	A Lothe.
Posen	.....	.....	30.41	772.5	33.8	1.0	95	NW	.....	.....	3	.....	10	.....	.....	0.220	5.6	Snowing	Dr. Magener.
Strassburg, (in Alsace)	.....	.....	30.57	776.5	30.7	— 0.7	94	NE	.....	.....	2	.....	8	.....	.....	0	0	.....	Dr. Schur.
Stuttgart	.....	.....	30.56	776.1	32.9	0.5	76	E	.....	.....	1	.....	2	.....	.....	0	0	.....	Prof. Schoder.
Thorn	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Dr. Hasenbalg.
Treves, (Trier)	.....	.....	30.46	773.7	29.7	— 1.3	83	NE	.....	.....	1	.....	2	.....	.....	0	0	Foggy	Prof. Flesch.
Weissenburg, (Bavaria)	28.95	735.4	30.56	776.3	29.3	— 1.5	98	NW	.....	.....	1	.....	10	.....	.....	0.039	1.0	.....	Dr. von Bebber.
Wustrow, Naval School	.....	.....	30.56	774.8	33.4	0.8	100	N	.....	.....	3	.....	10	.....	.....	0	0	Foggy	E. F. Schütz.
GERMAN NAVAL SERIES.																			

NOTE.—The elevation of Friedrichshafen is 413.4 meters, or 1,356.3 feet; Weissenburg, 431 meters, or 1,414.0 ft. In the originals the distinction between the amount of upper and lower clouds is not made. It is not always certain that the remarks in the weather column refer to the moment of observation.

GREEK SERIES.

Furnished by the cooperation of Professor Dr. J. F. Julius Schmidt, Director of the Royal Observatory at Athens.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Athens			30.00	762.0	50.0	10.0		NE			Strong							Half clear	

Note.—The originals give the barometer corrected, but not reduced to sea-level; occasionally the kind of clouds; the weather as published. They omit the humidity, wind-force, amount of cloudiness and rain-fall.

ITALIAN SERIES.

Furnished by the cooperation of His Excellency the Minister of Agriculture, Industry and Commerce, and the respective Observers.

Udine			30.27	768.8	46.6	8.1	43	Calm	0	0			6			0	0		Prof. Giovanni Clodig.
Stelvio	22.21	564.2			18.9	— 7.3		SE			1		6	W		0	0		Signora Ernesta Manfredi.
Valdobbia	22.24	565.0			22.1	— 5.6	48	NE			2		7	NE		0	0		Ab. Dom. Mongini.
Padua			30.28	769.1	44.1	6.7	58	SE	1.8	0.8			2	ENE		0	0		Prof. Dott. Lorenzoni.
Vicenza			30.32	770.1	45.5	7.5	61	SE	0.7	0.3			2			0	0		Conte Alm. Da Schio.
Verona			30.29	769.3	44.2	6.8	78	W			1		0			0	0		Dott. B. Bertoncelli.
Bergamo	28.90	734.1	30.27	768.9	43.2	6.2	50	SE			2		3			0	0		Prof Trionfini Carlo.
Domodossola			30.28	769.1	43.7	6.5	41	SW			6		7			0	0		Prof. Giuseppe Calza.
Milan			30.30	769.7	41.0	5.0	79	E			1		0			0	0		Ab. Gio. Capelli
Pavia			30.28	769.1	42.4	5.8	70	SE			2		1			0	0		Prof. Gio. Cantoni.
Moncalieri			30.29	769.3	43.2	6.2	67	ESE	2.5	1.1			1			0	0		Prof. P. F. Denza.
Mondovi	28.30	718.7	30.28	769.2	45.3	7.4	33	NNE			4		0			0	0		Prof. D. C. Bruno.
Porto Maurizio			30.28	769.0	55.8	13.2	30	SSW			2		0			0	0		Prof. L. Vassallo.
Genoa			30.23	767.9	55.2	12.9	26	N	4.3	1.9			0			0	0		Prof. G. M. Garibaldi.
Piacenza			30.30	769.6	41.9	5.5	74	E	0.7	0.3			0			0	0		Dott. G. Manzi.
Parma			30.30	769.7	47.1	8.4	68	ESE			4		2			0	0		Prof. P. Pigorini.
Florence			30.26	768.5	48.7	9.3	43	N			4		0			0	0		Cav. F. Meucci.
Leghorn			30.20	767.1	50.2	10.1	32	NE	20.8	13.3			0			0	0		Prof. P. Monte.
Siena	28.94	735.1	30.19	766.9	46.6	8.1	30	NE	6.3	2.8			0			0	0		Prof. L. Toscani.
Urbino	28.68	728.5	30.31	769.9	39.9	4.4	63	N			4		0			0	0		Prof. P. Serpieri.
Pesaro			30.28	769.1	45.5	7.5	73	NW	48.7	21.7			2	N		0	0		Prof. Luigi Guidi.
Ancona			30.23	767.8	47.8	8.8	54	NW			2		2			0	0		Prof. F. De— Bosis.
Grosseto			30.17	766.4	51.6	10.9	39	NNE			6		3	SE		0	0		Avv. P. Ponticelli.
Rome			30.11	764.9	50.4	10.2	60	N	18.6	8.3			8	ENE		0	0		Prof's. P. Secchi & L. Respighi.
Naples, O. U			30.10	764.4	50.4	10.2	44	ESE			6		9	NE		0	0		Prof. L. Palmieri.
Lecce			30.03	762.7	48.2	9.0	64	NNE	18.6	8.3			8			0	0		Prof. C. De—Giorgi.
Cosenza			30.05	763.3	48.7	9.3	72	ENE	8.1	3.6			9			0	0		Prof. F. D. Conti.
Cagliari																			Prof. A. Pacinotti.
Ripposto, (Sicily)			29.94	760.5	53.2	11.8	50	NNW			4		7	SW		0	0		Prof. F. Caffero.
Palermo			29.98	761.4	50.9	10.5	57	NE	7.4	3.3			10			0.213	5.4	Rain & hail.	Prof. G. Cacciatore.
Caltanissetta	28.00	711.1	30.00	762.1	45.1	7.3	55	N			4		10	SE		0	0		Prof. A. Pagani.
Siracusa			29.93	760.1	54.5	12.5	53	ENE			6		10	NE		0	0		Prof. V. Giuliano.
Sub-Series.																			
Naples, S. R.			30.12	765.1	46.0	7.8	55	ENE	2.7	1.1			10	E		0	0		Prof. F. Brioschi

Note.—The originals give the wind-force by the scale 0 to 4, or the velocity in kilometers per hour; generally, no distinction between upper and lower clouds; occasionally the weather by the Vienna symbols. The elevation of Stelvio is 2,543.0 meters, or 8,342.9 feet; Valdobbia, 2,548.0 meters or 8,359.3 feet; Bergamo, 379.6 meters, or 1,245.3 feet; Mondovi, 556 meters, or 1,824.2 feet; Siena, 348.5 meters, or 1,143.3 feet; Urbino, 451 meters, or 1,479.7 feet; Caltanissetta, 570.3 meters, or 1,871.0 feet.

JAPANESE SERIES.

Furnished by the coöperation of the Imperial University of Tokei, Japan.

Tokei			30.51	774.9	30	— 1.1		Calm	0	0			2			0	0		Prof. P. V. Veeder.

Note.—The originals give the amount of cloudiness by the scale 0 to 4 without distinguishing between upper and lower clouds. The rain-fall is measured at 7 a. m., local time

MEXICAN SERIES.

By authority of the Secretary of Public Works.

Furnished by the coöperation of Senor Mariano Barcena, Director of the Central Meteorological Observatory in the City of Mexico.

Mexico																			Mariano Barcena. Vicente Reyes. Miguel Perez. (Engineers in charge.)

Note.—The elevation of Mexico is 2,290 meters, or 7,512.9 feet. The rain-fall is measured at 6 a. m., local time.

NETHERLANDS' SERIES.

Furnished by the cooperation of Professor Buys Ballot, Director of the Royal Meteorological Institute of the Netherlands at Utrecht.

Flushing			30.51	775.0	35.6	2.0		SE			3					0	0		
Groningen			30.46	773.6	32.5	0.3		S								0	0		
Heider			30.50	774.6	33.6	0.9		SSE			2					0	0		
Utrecht			30.49	774.5	28.6	— 1.9	98	S			2					0	0	Hazy	

Note.—The originals give the wind-pressure in kilograms per square meter; for Utrecht, they give the weather as published, from which the amount of cloudiness is taken by the scale 0 to 4, without distinguishing between upper and lower clouds. It is assumed that the barometer readings have been reduced to sea-level.

NORWEGIAN SERIES.

Furnished by the cooperation of Professor H. Mohn, Director of the Royal Norwegian Meteorological Institute at Christiania.

Bergen			30.24	768.0	39.2	4.0	73	S	27.3	12.2			5			0	0		
Brönö			30.11	764.8	39.2	4.0	80	SSW	24.6	11			8			0.402	10.2		
Christiania			30.35	770.8	22.6	— 5.2	85	ENE	0	0			10			0	0	Light fog	
Tromsö			29.94	760.4	35.4	1.9	69	WSW	4.5	2			10			0	0		

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols. The cloudiness and weather at Bergen refer to 2h., p. m., local time, instead of 1h. 4 m.

PORTUGUESE SERIES.

Furnished by the coöperation of J. C. de Brito Capello, Director of the Meteorological Observatory of the Infante Don Luiz at Lisbon.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Angra, (Azores)	.....	.....	30.28	769.1	57.2	14.0	84	ENE	8.1	3.6	.....	.....	4	.....	.....	0	0	.....	Dr. J. A. Sampaio.
Campo Major	.....	.....	30.27	768.9	55.4	13.0	64	ENE	5.8	2.58	.....	.....	2	.....	.....	0	0	.....	Dr. A. M. R. dos Santos.
Funchal, (Madeira)	.....	.....	30.07	763.6	66.2	19.0	64	ESE	6.0	2.69	.....	.....	5	.....	.....	0	0	.....	Capt. D. A. de Cunha.
Lisbon	.....	.....	30.28	769.2	52.2	11.2	79	NE	15.0	6.7	.....	.....	1	W	.....	0	0	.....	The Observatory.
Ponta Delgada, (Azores)	.....	.....	30.27	768.8	59.4	15.2	70	NE	9.4	4.2	.....	.....	6	.....	.....	0	0	.....	
.....																			

Note.—The originals give the wind-velocity in kilometers per hour; occasionally, the weather by the Vienna symbols; the amount of cloudiness without distinguishing between upper and lower clouds; the barometer corrected but not reduced to sea-level. The rain-fall at Libson is measured at noon, instead of 0 h. 6 m., p. m.

RUSSIAN SERIES.

Furnished by the coöperation of Professor H. Wild, Director of the Imperial Central Physical Observatory of Russia, at St. Petersburg.

Warsaw	.....	.....	30.35	770.9	30.7	— 0.7	98	WNW	7	3	.....	.....	10	.....	.....	.....	.....	Light fog.....	Astronomical Obs.
Wilna	.....	.....	30.34	770.6	23.7	— 4.6	89	Calm	0	0	.....	.....	10	.....	.....	.....	.....	.....	Astronomical Obs.
Dorpat	.....	.....	30.16	765.8	29.8	— 1.2	96	SSW	9	4	.....	.....	10	.....	.....	.....	.....	Snowing....	Physical Cabinet.
St. Petersburg	.....	.....	30.17	766.4	26.4	— 3.1	91	SW	9	4	.....	.....	10	.....	.....	.....	.....	.....	Central Physical Obs.
Kuopio	.....	.....	30.05	763.3	27.9	— 2.3	98	Calm	0	0	.....	.....	10	.....	.....	.....	.....	.....	Ch. Forsten.
Kieff	.....	.....	30.33	770.4	18 1	— 7.7	81	S	4	2	.....	.....	10	.....	.....	.....	.....	.....	Physical Cabinet.
Nikolaiev	.....	.....	30.30	769.7	13.1	—10.5	77	NNE	13	6	.....	.....	0	.....	.....	.....	.....	.....	Kurdakof.
Kertch	.....	.....	30.13	765.3	28.8	— 1.8	94	NE	16	7	.....	.....	10	.....	.....	.....	.....	.....	Lagorio.
Moscow	.....	.....	30.38	771.6	20.1	— 6.6	95	SSW	9	4	.....	.....	10	.....	.....	.....	.....	.....	Meteorological Obs.
Lugan	.....	.....	30.28	769.2	7.3	—13.7	71	Calm	0	0	.....	.....	0	.....	.....	.....	.....	.....	Meteorological Obs.
Archangel	.....	.....	29.92	760.0	25.9	— 3.4	95	SW	18	8	.....	.....	10	.....	.....	.....	.....	.....	Ogorodnikof.
Tiflis	28.69	728.6	30.14	765.6	42.3	5.7	63	S	4	2	.....	.....	4	.....	.....	.....	.....	.....	Physical Observatory.
Astrakhan	.....	.....	30.27	768.8	19.2	— 7.1	75	NE	7	3	.....	.....	5	.....	.....	Blank	Blank	.....	Sebastianof.
Kasan	.....	.....	30.47	774.0	— 0.9	—18.3	91	S	7	3	.....	.....	10	.....	.....	.....	.....	.....	Physical Cabinet.
Orenburg	.....	.....	30.23	767.7	14.2	— 9.9	84	E	13	6	.....	.....	10	.....	.....	.....	.....	.....	Tschernischef.
Ekaterinburg	29.42	747.3	30.46	773.6	11.3	—11.5	86	WSW	9	4	.....	.....	4	.....	.....	.....	.....	.....	Meteorological Obs.
Nukuss	.....	.....	30.17	766.4	20.1	— 6.6	84	ENE	9	4	.....	.....	10	.....	.....	.....	.....	.....	
Kasaly	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Bobrof.
Tashkend	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Michelson.
Barnaul	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Yeniseisk	.....	.....	30.09	770.5	— 7.8	—22.1	78	SSW	11	5	.....	.....	10	.....	.....	.....	.....	.....	Meteorological Obs.
Irkutsk	.....	.....	30.10	764.4	— 2.9	—19.4	78	SW	4	2	.....	.....	1	.....	.....	.....	.....	.....	Marks.
Peking, (China)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Usolzef.
Nertchinsk	.....	.....	30.45	773.4	28.0	— 2.2	96	Calm	0	0	.....	.....	9	.....	.....	Blank	Blank	.....	Physical Observatory.
Vladivostock	28.38	720.9	30.84	783.4	—24.2	—31.2	96	Calm	0	0	.....	.....	0	.....	.....	.....	.....	.....	Meteorological Obs.
Nikolaievsk, on the Amoor	.....	.....	30.61	777.5	10.4	—12.0	63	NW	13	6	.....	.....	1	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	—13.9	—25.5	.....	W	2	1	.....	.....	0	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols; they omit the rain-fall. The elevation of Tiflis is 409 meters, or 1,341.8 feet; Ekaterinburg, 306.4? m., or 1,005.2? ft.; Tashkend, 494.2? m., or 1,621.3? ft.; Irkutsk, 392 m., or 1,286 ft.; Nertchinsk, 592.0? m., or 1,942.2? ft.

SPANISH SERIES.

Furnished by the coöperation of Antonio Aguilar, Director of the Royal Observatory at Madrid, and of Don Cecilio Pujazon, Captain R. N. Director of the Naval Observatory at San Fernando.

Madrid	.....	.....	30.37	771.4	39.9	4.4	97	S	2.2	1.00	.....	0	5	.....	.....	0.008	0.2	Cloudy	Royal Observatory.
San Fernando	.....	.....	30.24	768.2	61.9	16.6	55	ESE	18.3	8.2	.....	0	3	.....	SE	.....	.....	.....	Naval Observatory.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

Note.—The originals give the weather in general terms, as published; rain-fall for San Fernando from preceding to following midnight; wind-velocity for Madrid in kilometers per hour.

SWEDISH SERIES.

Furnished by the coöperation of Professor R. Rubenson, Director of the Royal Swedish Meteorological Institute, at Stockholm, and of Dr. H. H. Hildebrandsson, Chief of the Meteorological Division of the Upsala Observatory.

Haparanda	.....	.....	30.01	762.3	5.0	—15.0	91	Calm	.....	.....	0	.....	0	.....	.....	0	0	.....	
Umea	.....	.....	30.21	767.4	26.2	— 3.2	96	NW	.....	.....	2	.....	1	.....	.....	0	0	.....	
Hernosand	.....	.....	30.26	768.5	24.8	— 4.0	98	Calm	.....	.....	0	.....	1	.....	.....	0	0	.....	
Stockholm	.....	.....	30.28	769.1	28.0	— 2.2	92	W	.....	.....	2	.....	1	.....	.....	0	0	.....	
Wisby	.....	.....	30.33	770.4	32.4	0.2	96	NNW	.....	.....	6	.....	0	.....	.....	0	0	.....	
Sub-Series.																			
Upsala	.....	.....	30.28	769.1	29.1	— 1.6	79	NW	0	0	.....	.....	1c	NW	.....	0.002	0.05	.....	Dr. Hildebrandsson.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

Note.—The originals give the wind-force by the scale 0 to 6, and Upsala also velocity in meters per second; occasionally, the weather by the Vienna symbols, or in general terms; no distinction between the amount of upper and lower clouds. The rain-fall is measured at 8 a. m., local time.

SWISS SERIES.

Furnished by the coöperation of Professor R. Wolf, Director of the Observatory at Zurich, and of Professor E. Plantamour, Director of the Observatory at Geneva.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Geneva	28.99	736.3	30.48	774.2	33.3	0.7	73	NNE	.....	.....	3	.....	10	.....	.....	0	0	Covered	The Observatory.
Zurich	28.81	731.7	30.53	775.4	30.6	— 0.8	76	E	.....	.....	1	.....	9	.....	.....	0	0	Covered	The Observatory.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—For Geneva the corresponding departures from the normal values are: Barometer, +8.9 mm; Thermometer, —1.1 cent.; Relative Humidity, —5 per cent.

NOTE.—The rain-fall is measured at Zurich at 7 a. m. on the following day. The originals give the barometer corrected but not reduced to sea-level; the wind-force by the scale 0 to 4 for Zurich; the amount of cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The elevation of Geneva is 408 meters, or 1,339 feet, and that of Zurich 470 meters, or 1,542 feet.

TURKISH SERIES.

Furnished by the coöperation of A. Coumbary, Effendi, Director of the Central Observatory at Constantinople, and of Professor C. V. A. Van Dyck, Superintendent of the Lee Observatory at Beirut.

Constantinople	.....	.....	30.00	761.9	41.9	5.5	87	N	22	10.0	.....	.....	10	.....	NNE	0.449	11.4	.....	
Fao, (Persian Gulf)	.....	.....	30.19	766.9	62.6	17.0	.....	NW	.....	.....	3	.....	10	.....	.....	.....	.....	Raining.....	
Salonica	.....	.....	30.13	765.2	39.2	4.0	.....	N	.....	.....	3	.....	10	.....	.....	.....	.....	Snowing.....	
Valona	.....	.....	29.91	759.6	52.3	11.3	.....	NW	.....	.....	1	.....	5	.....	.....	.....	.....	.....	
Varna	.....	.....	30.08	764.0	26.6	— 3.0	.....	NW	.....	.....	4	.....	2	.....	.....	.....	.....	.....	
SUB-SERIES.																			
Beirut, (Syria,) Lee Obs'y	.....	.....	30.04	762.9	58.8	14.9	69	SW	.....	.....	4	.....	9n	.....	SW	0.60	15.2	Overcast.....	Prof. C. V. A. Van Dyck.

NOTE.—The originals give the wind-force by the scale 0 to 7, (except Beirut, by the scale 0 to 12, and Constantinople velocity in meters per second;) the weather in general terms as published; no distinction between upper and lower clouds, and, except Constantinople and Beirut, the amount by the scale 0 to 4. It is assumed that the barometer is reduced to sea-level.

CANADIAN SERIES.

Furnished by the coöperation of Professor G. T. Kingston, Director of the Magnetic Observatory at Toronto, and Superintendent of the Meteorological Office of the Dominion of Canada, and the respective Observers. Those marked with a star (*) are also telegraphed daily to the office of the Chief Signal Officer, U. S. Army.

Bathurst, N. B	.....	.....	29.92	760.0	3.5	—15.8	90	Calm	0	0	.....	.....	10	.....	.....	.....	.....	.....	Hon. J. Ferguson.
Brockville, Ontario	.....	.....	30.28	769.1	16	— 8.9	.....	Calm	0	0	.....	.....	10s	.....	W	0	0	Cloudy	W. R. Bigg.
*Chatham, N. B	.....	.....	29.98	761.5	7	—13.9	100	SW	1	0.4	.....	8k	2ks	SW	SW	0	0	Cloudy.....	G. A. Blair.
Charlottetown, P. E. Island	.....	.....	29.99	761.7	22	— 5.6	92	Calm	0	0	.....	.....	10n	.....	.....	Inap.	Inap.	Cloudy.....	H. J. Cundall, C. E.
Cornwall, Ontario	.....	.....	30.25	768.3	13.9	—10.1	87	W	.....	.....	1	.....	10s	.....	.....	0	0	Dull	James Smith, M. A.
Dalhousie, N. B	.....	.....	30.00	762.0	.....	.....	.....	W	.....	.....	1	.....	.....	.....	.....	0	0	Clear.....	H. A. Johnson.
Esquimault, B. C	.....	.....	30.31	769.9	32.1	0.1	90	N	.....	.....	0	0	0	.....	.....	0	0	Clear.....	W. H. Bevis.
Fredericton, N. B	.....	.....	30.10	764.5	5.1	—14.9	85	Calm	0	0	.....	.....	10s?	.....	W	0	0	Clear?.....	Prof. Harrison.
*Fort Garry, Manitoba	.....	.....	29.95	760.7	12	—11.1	92	NW	16	7.2	.....	.....	10n	.....	.....	0	0	Cloudy.....	James Stewart.
Goderich, Ontario	.....	.....	30.43	772.9	6.9	—13.9	91	W	.....	.....	2	0	1s	.....	.....	0	0	Fair	H. J. Strang, M. A.
Granton, Ontario	29.18	741.2	30.42	772.7	2.7	—16.3	.....	SW	.....	.....	.....	0	0	.....	.....	0	0	Clear	James Grant.
*Halifax, N. S	.....	.....	29.99	761.7	28	— 2.2	92	W	5	2.2	.....	.....	10n	.....	.....	0.170	4.32	Cloudy.....	F. Allison, M. A.
Hamilton, Ontario	.....	.....	30.41	772.4	12.7	—10.7	84	W	.....	.....	2	10cs	0	W	.....	0	0	Cloudy.....	G. Dickson.
Heart's Content, N. F	.....	.....	29.99	761.7	22	— 5.6	100	SW	.....	.....	1	1?k	0	SW	.....	0	0	Cloudy? ...	E. Weedon.
*Kingston, Ontario	.....	.....	30.34	770.6	16	— 8.9	85	Calm	0	0	.....	.....	10s	.....	.....	Inap.	Inap.	Cloudy.....	S. Woods, M. A.
*Montreal, Quebec	.....	.....	30.21	767.3	13	—10.6	78	W	5	2.2	.....	2ck	5ks	.....	.....	0	0	Cloudy.....	C. H. McLeod, C. E.
*Ottawa, Ontario	.....	.....	30.23	767.8	12	—11.1	80	W	2	0.9	.....	.....	10ks	.....	W	0	0	Cloudy.....	J. B. Haney.
*Parry Sound, Ontario	.....	.....	30.30	769.6	4	—15.6	85	S	2	0.9	.....	.....	10n	.....	S	0.07	1.8	Cloudy.....	Rev. R. Mosley.
Port Dover, Ontario	.....	.....	30.41	772.4	9	—12.8	92	W	8	3.6	.....	0	0	.....	.....	0	0	Clear	H. Morgan.
Port Hastings, N. S	.....	.....	29.97	761.2	29.7	— 1.3	.....	SE	3	1.3	.....	.....	.....	.....	.....	0	0	Fine.....	Peter Grant.
Port Stanley, Ontario	.....	.....	30.43	772.9	5	—15.0	95	W	8	3.6	.....	0	0	.....	.....	0	0	Clear.....	M. Payne.
*Quebec, Quebec	.....	.....	30.17	766.3	10	—12.2	79	W	3	1.3	.....	.....	10n	.....	W	0.05	1.3	Cloudy.....	Capt. Ashe, R. N.
*Rockliffe, Ontario	.....	.....	30.27	768.8	—10	—23.3	100	NW	5	2.2	.....	.....	8s	.....	W	0	0	Fair.....	
St. John, N. B	.....	.....	30.10	764.5	19	— 7.2	84	W	6	2.7	.....	.....	7ks	.....	.....	0	0	Cloudy.....	G. Murdoch, C. E.
*Saugeen, Ontario	.....	.....	30.30	769.6	11	—11.7	77	SW	11	4.9	.....	.....	10n	.....	W	0.01	0.3	Cloudy.....	K. Stewart.
Stayner, Ontario	.....	.....	30.27	768.8	12	—11.1	72	W	5	2.2	.....	10cs	0	NW	.....	Inap.	Inap.	Cloudy.....	R. J. Cole.
Stratford, Ontario	28.98	736.1	30.41	772.4	5.0	—15.0	93	SW	11	4.9	.....	1cs	2s	SW	.....	0	0	Fine.....	C. J. MacGregor, M. A.
*Sydney, C. B	.....	.....	29.99	761.7	25	— 3.9	95	S	5	2.2	.....	.....	10n	.....	.....	Inap	Inap.	Light snow..	T. C. Hill.
*Toronto, Ontario	.....	.....	30.39	771.9	11	—11.7	78	W	11	4.9	.....	0	2ks	.....	W	0	0	Clear	Magnetic Observatory.
Woodstock, Ontario	.....	.....	30.31	769.9	5.7	—14.6	96	W	9	4.0	.....	0	2s	.....	W	0	0	Clear	J. Montgomery.
SUB-SERIES.																			
St. Johns, Newfoundland	.....	.....	30.10	764.5	20.0	— 6.7	.....	SE	.....	.....	.....	Haze	Haze	.....	.....	0	0	Fair.....	John Delany.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—The originals for Brockville, Charlottetown, Port Dover, Port Stanley, Stayner, St. Johns, N. F. and those telegraphed, give the amount of cloudiness by the scale 0 to 4. The elevation of Granton is 1,015 feet, or 309.4 m.; Stratford, 1,18[illegible] feet, or 360.3 m.

UNITED STATES SERIES.

Furnished by the coöperation of Bvt. Brig. Gen. Albert J. Myer, Chief Signal Officer, U. S. Army.

STATIONS.	Barometer: Corrected for instrum'tal error and temperature. Inches.	Barometer: Corrected for instrum'tal error and temperature. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather	Observer.
Albany, N. Y.	.....	.....	30.30	769.6	19	— 7.2	84	Calm	0	0	.....	Haze	2s	.....	.....	0	0	Fair	
Alpena, Mich.	.....	.....	30.31	769.9	2	—16.7	72	SW	4	1.8	.....	5ck	0	SW	.....	0.01	0.3	Fair	
Atlantic City, N. J.	.....	.....	30.37	771.4	24	— 4.4	87	NW	4	1.8	.....	10c	0	SW	.....	0.11	2.8	Cloudy	
Augusta, Ga.	.....	.....	30.32	770.1	43	6.1	100	E	7	3.1	.....	.....	10n	.....	E	0.42	29.7	Light rain	
Baltimore, Md.	.....	.....	30.38	771.6	31	— 0.6	79	Calm	0	0	.....	5c	Fog	.....	.....	0.21	5.3	Foggy	
Barnegat, N. J.	.....	.....	30.36	771.1	25	— 3.9	88	NW	8	3.6	.....	10ck	Haz	W	.....	0.20	5.1	Cloudy	
Bismarck, Dakota	28.32	719.3	30.12	765.0	8	—13.3	78	NW	14	6.3	.....	8k	0	NW	.....	0	0	Fair	
Boston, Mass.	.....	.....	30.22	767.6	25.5	— 3.6	70	W	4	1.8	.....	.....	10s	.....	W	0	0	Cloudy	
Breckenridge, Minn.	.....	.....	29.99	761.7	6	—14.4	76	SW	26	11.6	.....	.....	10s	.....	W	0	0	Cloudy	
Buffalo, N. Y.	.....	.....	30.37	771.4	15	— 9.4	64	W	15	6.7	.....	5k	0	W	.....	0	0	Fair	
Burlington, Vt.	.....	.....	30.23	767.8	19	— 7.2	70	NE	5	2.2	.....	.....	10s	.....	.....	0	0	Cloudy	
Cairo, Ill.	.....	.....	30.50	777.0	22	— 5.6	72	N	12	5.4	.....	8ck	0	W	.....	0	0	Fair	
Cape Hatteras, N. C.	.....	.....	30.26	768.6	41	5.0	91	NE	17	7.6	.....	.....	10s	.....	.....	0.20	5.1	Cloudy	
Cape Henry, Va.	.....	.....	30.37	771.4	34	1.1	90	N	17	7.6	.....	.....	10s	.....	NW	1.17	29.7	Cloudy	
Cape Lookout, N. C.	.....	.....	30.36	771.1	41	5.0	91	NE	16	7.2	.....	.....	10s	.....	.....	0.26	6.6	Cloudy	
Cape May, N. J.	.....	.....	30.37	771.4	29	— 1.7	78	N	17	7.6	.....	0	8s	.....	NW	0.19	4 8	Fair	
Charleston, S. C.	.....	.....	30.31	769.9	44	6.7	92	N	10	4.5	.....	.....	10n	.....	.....	0.08	2.0	Light rain	
Cheyenne, Wyoming	24.08	611.6	30.02	762.5	16	— 8.9	67	W	24	10.7	.....	0	0	.....	.....	0	0	Clear	
Chicago, Ill.	.....	.....	30.53	775.4	— 4	—20.0	64	SW	9	4.0	.....	0	0	.....	.....	0	0	Clear	
Cincinnati, Ohio	.....	.....	30.48	774.2	21	— 6.1	57	N	8	3.6	.....	0	Sm'k	.....	N	0	0	Clear	
Cleveland, Ohio	.....	.....	30.48	774.2	10.5	—11.9	79	SW	8	3.6	.....	.....	10s	.....	SW	0	0	Cloudy	
Corsicana, Tex.	.....	.....	30.55	776.0	33	0.6	69	NW	8	3.6	.....	2cs	0	.....	.....	0	0	Clear	
Davenport, Iowa	.....	.....	30.60	777.2	—10	—23.3	77	SW	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Denison, Tex.	.....	.....	30.63	778.0	23	— 5.0	60	N	8	3.6	.....	0	0	.....	.....	0	0	Clear	
Denver, Col.	24.92	633.0	30.14	765.5	11	—11.7	79	S	5	2.2	.....	0	0	.....	.....	0	0	Clear	
Detroit, Mich.	.....	.....	30.44	773.2	6	—14.4	76	SW	7	3.1	.....	10cs	0	.....	.....	0	0	Cloudy	
Dodge City, Kan.	27.77	705.4	30.40	772.1	— 2	—18.9	67	W	4	1.8	.....	0	0	.....	.....	0.02	0.5	Clear	
Dubuque, Iowa	.....	.....	30.53	775.4	—19	—28.3	30	Calm	0	0	.....	0	Haze	.....	.....	0	0	Clear	
Duluth, Minn.	.....	.....	29.98	761.5	1	—17.2	72	W	8	3.6	.....	.....	10s	.....	W	0	0	Cloudy	
Eastport, Me.	.....	.....	30.07	763.8	21	— 6.1	85	W	5	2.2	.....	0	8s	.....	W	Inap.	Inap.	Fair	
Erie, Pa.	.....	.....	30.44	773.2	11	—11.7	79	SW	10	4.5	.....	0	1s	.....	.....	0	0	Clear	
Escanaba, Mich.	.....	.....	30.23	767 8	— 6	—21.1	61	SW	16	7.2	.....	0	2s	.....	.....	0	0	Clear	
Fort Gibson, Indian Ter.	.....	.....	30.58	776.7	21	— 6.1	68	N	5	2.2	.....	0	0	.....	.....	0	0	Clear	
Ft. St. Michael, Alaska	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Fort Sill, Indian Ter.	29.34	745.2	30.59	777.0	16	— 8.9	28	N	.....	.....	.....	0	0	.....	.....	0	0	Clear	
Fort Sully, Dakota	28.38	720.8	30.20	767.1	11	—11.7	79	NW	5	2.2	.....	0	0	.....	.....	0	0	Clear	
Florence, Arizona	28.08	728.5	30.25	768.3	45	7.2	.....	W	.....	.....	.....	0	0	.....	.....	0	0	Clear	
Galveston, Tex.	.....	.....	30.38	771.6	44	6.7	75	N	28	12.5	.....	.....	10s	.....	W	0.12	3.0	Cloudy	
Grand Haven, Mich.	.....	.....	30.41	772.4	15	— 9.4	83	SW	20	8.9	.....	0	9s	.....	W	0	0	Cloudy	
Indianapolis, Ind.	.....	.....	30.57	776.5	10	—12.2	79	NW	2	0.9	.....	0	Sm'k	.....	.....	0	0	Clear	
Indianola, Tex.	.....	.....	30.40	772.1	44	6.7	67	N	24	10.7	.....	.....	10s	.....	.....	0.04	1.0	Cloudy	
Jacksonville, Fla.	.....	.....	30.20	767.1	64	17.8	88	NE	4	1.8	.....	.....	10s	.....	.....	0.42	10.7	Cloudy	
Keokuk, Iowa	.....	.....	30.61	777.6	— 2	—18.9	83	W	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Key West, Fla.	.....	.....	30.20	767.1	75	23.9	85	SE	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Kittyhawk, N. C.	.....	.....	30.37	771.4	38	3.3	71	NE	26	11.6	.....	.....	10s	.....	.....	0.23	5.8	Cloudy	
Knoxville, Tenn.	.....	.....	30.42	772.7	31	— 0.6	89	N	12	5.4	.....	.....	10n	.....	.....	0.11	2.8	Light snow	
La Crosse, Wis.	.....	.....	30.37	771.4	— 6	—21.1	61	SE	8	3.6	.....	0	0	.....	.....	0	0	Clear	
Leavenworth, Kan.	.....	.....	30.61	778.2	1	—17.2	85	NE	2	0.9	.....	0	0	.....	.....	Inap.	Inap.	Clear	
Louisville, Ky.	.....	.....	30.53	775.4	22	— 5.6	72	N	10	4.5	.....	0	0	.....	.....	0	0	Clear	
Lynchburg, Va.	.....	.....	30.40	772.1	36	2.2	80	Calm	0	0	.....	.....	10s	.....	.....	0.36	9.1	Cloudy	
Malone, N. Y.	.....	.....	30.23	767.8	19	— 7.2	84	SW	4	1.8	.....	.....	10s	.....	SW	0	0	Cloudy	
Marquette, Mich.	.....	.....	30.10	764.5	5	—15.0	75	S	4	1.8	.....	.....	10s	.....	.....	0	0	Cloudy	
Memphis, Tenn.	.....	.....	30.53	775.4	30	— 1.1	67	N	8	3.6	.....	.....	10s	.....	NW	0.13	3.3	Cloudy	
Milwaukee, Wis.	.....	.....	30.50	774.7	— 9	—22.8	78	SW	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Mobile, Ala.	.....	.....	30.27	768.8	45	7.2	100	N	12	5.4	.....	.....	10n	.....	.....	0.71	18.0	Light rain	
Montgomery, Ala.	.....	.....	30.30	769.6	46.5	8.1	88	N	8	3.6	.....	.....	10s	.....	N	0.16	4.1	Cloudy	
Morgantown, W. Va.	29.30	744.2	30.44	773.2	25	— 3.9	63	NW	5	2.2	.....	0	0	.....	.....	0.02	0.5	Clear	
Mt. Washington, N. H.	23.35	593.1	29.71	754.6	— 4	—20.0	100	NW	50	22.4	.....	.....	Fog	.....	.....	0	0	Foggy	
Nashville, Tenn.	.....	.....	30.46	773.7	31	— 0.6	68	N	4	1.8	.....	.....	10s	.....	SW	Inap	Inap.	Cloudy	
New Haven, Conn.	.....	.....	30.32	770.1	29	— 1.7	67	NW	5	2.2	.....	Haz.	0	.....	.....	0.10	2.5	Clear	
New London, Conn.	.....	.....	30.26?	767.1?	26	— 3.5	76	W	4	1.8	.....	2c	5cs	W	W	0.18	3.3	Fair	
New Orleans, La.	.....	.....	30.25	768.3	48	8.9	88	N	17	7.6	.....	.....	10n	.....	N	0.73	18.5	Light rain	
Newport, R. I.	.....	.....	30.27	768.8	28	— 2.2	77	W	10	4.5	.....	.....	10ks	.....	W	0.15	3.8	Cloudy	
New York, N. Y.	.....	.....	30.34	770.6	26	— 3.3	76	NW	2	0.9	.....	5ck	2s	W	W	0.26	6.6	Fair	
Norfolk, Va.	.....	.....	30.38	771.6	34	1.1	79	N	10	4.5	.....	2ck	8s	W	W	0.56	14.2	Cloudy	
North Platte, Neb.	27.26	692.4	30.15	765.8	0	—17.8	85	W	20	8.9	.....	0	0	.....	.....	0	0	Clear	
Omaha, Neb.	29.24	742.7	30.47	773.9	3	—16.1	73	S	8	3.6	.....	0	0	.....	W	0	0	Clear	
Oswego, N. Y.	.....	.....	30.31	769.9	23.5	— 4.7	81	SW	17	7.6	.....	.....	10n	.....	.....	Inap.	Inap.	Light snow	
Pembina, Dakota	.....	.....	29.84	757.9	12	—11.1	80	NW	22	9.8	.....	.....	10s	.....	.....	0	0	Cloudy	
Philadelphia, Pa.	.....	.....	30.39	771.9	28	— 2.2	72	N	10	4.5	.....	5c	2s	W	.....	0.06	1.5	Cloudy	
Pike's Peak, Col.	17.64	448.0	29.85	758.2	— 1.5	—18.6	52	N	22	9.8	.....	0	1s	.....	.....	Inap.	Inap.	Clear	
Pittsburgh, Pa.	.....	.....	30.46	773.7	19	— 7.2	77	NW	7	3.1	.....	0	0	.....	.....	0	0	Clear	
Port Huron, Mich.	.....	.....	30.43	772.9	4	—15.6	87	S	7	3.1	.....	0	Haze	.....	.....	0	0	Hazy	
Portland, Me.	.....	.....	30.18	766.6	25	— 3.9	75	W	3	1.3	.....	10cs	Haze	W	.....	0	0	Cloudy	
Portland, Oregon	.....	.....	30.32	770.1	32	0.0	89	E	8	3.6	.....	0	5s	.....	.....	0	0	Fair	
Punta Rassa, Fla.	.....	.....	30.21	767.3	69.5	20.8	97	E	3	1.3	.....	.....	Fog	.....	.....	0	0	Foggy	
Rochester, N. Y.	.....	.....	30.35	770.0	16	— 8.9	67	W	19	8.5	.....	8k	0	W	.....	0	0	Fair	
Salt Lake City, Utah	26.02	660.9	30.35	770.9	8	—13.3	78	E	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Sandy Hook, N. J.	.....	.....	30.31	769.9	28	— 2.2	88	NW	10	4.5	.....	10cs	0	SW	.....	0.21	5.3	Cloudy	
San Diego, Cal.	.....	.....	30.17	766.3	54	12.2	73	Calm	0	0	.....	0	2s	.....	.....	0	0	Clear	
San Francisco, Cal.	.....	.....	30.18	766.6	51	10.6	59	SE	4	1.8	.....	Haz	4s	.....	.....	0	0	Fair	
Santa Fé, N. M.	23.43	595.1	29.97	761.2	13	—10.0	62	N	6	2.7	.....	0	0	.....	.....	0	0	Clear	
Savannah, Ga.	.....	.....	30.31	769.9	49	9.4	93	NE	9	4.0	.....	.....	Fog	.....	.....	0.16	4.1	Foggy	
Shreveport, La.	.....	.....	30.54	775.7	35	1.7	90	N	7	3.1	.....	.....	10s	.....	.....	0	0	Cloudy	
Smithville, N. C.	.....	.....	30.34	770.6	39	3.9	91	N	7	3.1	.....	.....	10s	.....	N	0.07	1.8	Cloudy	
Springfield, Mass.	.....	.....	30.28	769.1	27	— 2.8	69	Calm	0	0	.....	5k	5s	SW	.....	Inap.	Inap	Cloudy	
St. Louis, Mo.	.....	.....	30.66	778.7	10	—12.2	79	N	4	1.8	.....	0	0	.....	.....	0	0	Clear	
St. Marks, Fla.	.....	.....	30.22	767.6	61	16.1	94	SE	3	1.3	.....	2cs	5s	W	SE	0.61	15.5	Fair	
St. Paul, Minn.	.....	.....	30.15	765.8	0	—17.8	84	SE	4	1.8	.....	5c	2s	.....	.....	0	0	Fair	
St. Paul's Island, Alaska	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Thatcher's Island, Mass.	.....	.....	30.21	767.3	25	— 3.9	63	W	8	3.6	.....	.....	10s	.....	NW	0	0	Cloudy	
Toledo, Ohio	.....	.....	30.48	774.2	13	—10.6	81	SW	8	3.6	.....	Haze	Haz	.....	.....	0	0	Hazy	
Tucson, Arizona	27.76	705.1	30.31	769.9	27	— 2.8	.....	SE	.....	.....	.....	1k	0	W	.....	0	0	Clear	
Tybee Island, Ga.	.....	.....	30.27	768.8	48	8.9	100	NE	16	7.2	.....	.....	10s	.....	NE	0.05	1.3	Cloudy	
Vicksburg, Miss.	.....	.....	30.46	773.7	35	1.7	95	N	8	3.6	.....	.....	10s	.....	N	0.13	3.3	Cloudy	
Virginia City, M. T.	24.47	621.5	29.95	760.7	1	—17.2	85	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Washington, D. C.	.....	.....	30.40	772.1	26	— 3.3	82	NW	4	1.8	.....	1c	5s	W	W	0 20	7.4	Smoky	
Wilmington, N. C.	.....	.....	30.35	770.9	39	3.9	90	NE	5	2.2	.....	.....	10s	.....	NE	0.05	1.3	Cloudy	

UNITED STATES SERIES.—CONTINUED.

STATIONS.	BAROMETER. Corrected for instrum'tal error and temperature. Inches.	BAROMETER. Corrected for instrum'tal error and temperature. Millimeters.	BAROMETER. Reduced to sea-level. Inches.	BAROMETER. Reduced to sea-level. Millimeters.	TEMPERATURE OF THE AIR. Fahrenheit.	TEMPERATURE OF THE AIR. Centigrade.	RELATIVE HUMIDITY. Per cent.	WIND. Direction. From—	WIND. Velocity. Miles per hour.	WIND. Velocity. Meters per second.	WIND. Force. 0—10.	CLOUDS. Amount. Upper. 0—10.	CLOUDS. Amount. Low'r. 0—10.	CLOUDS. Direction. Upper. From—	CLOUDS. Direction. Lower. From—	RAIN-FALL OR MELTED SNOW IN THE PAST 24 HOURS. Inches.	RAIN-FALL OR MELTED SNOW IN THE PAST 24 HOURS. Millimeters.	WEATHER.	OBSERVER.
Wood's Holl, Mass.	.....	.....	30.27	768.8	27	— 2.8	77	NW	10	4.5	.....	.....	10s	.....	NW	0.15	3.8	Cloudy.....	
Yankton, Dakota	28.87	733.3	30.30	769.6	8	—13.3	66	SW	15	6.7	.....	0	0	.....	.....	0	0	Clear	
Yuma, Arizona	.....	.....	30.10	764.5	55	12.8	.....	Calm	.....	.....	.....	0	5s	.....	.....	0	0	Fair	
SUB-SERIES.																			
Kingston, Jamaica, W. I.	.....	.....	30.17	766.3	76	24.4	78	N	4	1.8	.....	5c	2s	.....	.....	0	0	.....	James Gall.
Navassa, W. I.	.....	.....	.....	.....	78	25.6	.....	E	.....	.....	2	.....	.....	.....	.....	0.10	2.5	Clear.....	F. M. Everett.
Clifton, Ja., W. I.	27.27	692.6	30.07	763.8	65	18.3	73	NE	1.0	0.4	.....	2c	0	NE	.....	0	0	Fine, clear...	C. Partridge.
Paramaribo, D. Guiana, S.A.	.....	.....	30.05	763.3	78	25.6	91	E	.....	.....	3	.....	10n	.....	.....	0.540	13.72	Rainy.....	C. J. Hering.
Batavia, Dutch Guiana, S.A.	30.07	763.7	.....	.....	80.2	26.8	.....	E	.....	.....	.....	.....	.....	.....	.....	0	0	Clear	Dr. H. Groot.
Medellin, Colombia, S. A.	25.24	641.1	.....	.....	65.8	18.8	78	NE	.....	.....	1	1cs,ks	7s,ks	.....	.....	0	0	Cloudy.....	Thomas Herran.
York Factory, B. A.	.....	.....	29.72	755.1	—18.0	—27.8	68	W	12	5.4	.....	.....	10n	.....	.....	0.10	2.5	Snowing.....	J. Fortescue, W. Wood.
Honolulu, Oahu, H. I.	.....	.....	30.05	763.3	67	19.4	94	ESE	.....	.....	2	.....	.....	.....	.....	0	0	Clear	Daniel Smith.
Makawao, Maui, H. I.	.....	.....	29.98	761.5	54	12.2	73	Calm	.....	.....	0	0	2k	.....	.....	0	0	.....	F. L. Clarke.

NOTE.—The originals give the amount of cloudiness by the scale 0 to 4, except York Factory, Makawao, Medellin and Paramaribo. The elevation of the barometer at Bismarck is 1,677 feet, or 511.1 metrs; Cheyenne, 6,057.3 ft., or 1,846.2 m.; Clifton, about 2,892 ft. or 881.5 m.; Denver, 5,195 ft., or 1,585.2 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Florence, 1,550 (?) ft. or 472.5 (?) m.; Makawao, 2,205 ft., or 672.1 m.; Morgantown, 1,027.9 ft., or 313.3 m.; Medellin, 4,876 ft., or 1,486.2 m.; Mt. Washington, 6,285 ft., or 1,915.6 m.; North Platte, 2,846 ft. or 867.4 m.; Omaha, 1,054.6 ft., or 321.4 m.; Pike's Peak, 14,160.7 ft., or 4,313.1 m.; Salt Lake City, 4,362.2 ft., or 1,329.6 m.; Santa Fé, 6,862.2 (?) ft., or 2,091.6 (?) m.; Tucson, 2,513 (?) ft., or 772.1 (?) m.; Virginia City, 5,480 (?) ft., or 1,670.3 (?) m.; Yankton, 1,278 ft., or 389.5 m. The following constants are added in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Denver, 5.22 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fé, 6.64 in.; Tucson, 2.59 in.; Virginia City, 5.48 in. The elevation of Batavia is about 6 feet; the barometric readings need the addition of 0.2 mm. or 0.01 in. for reduction to sea-level.

UNITED STATES NAVAL SERIES.

By authority of the **SECRETARY OF THE NAVY.**

Furnished by the cooperation of the Navy Department, through Commodore Daniel Ammen, U. S. N., Chief of Bureau of Navigation.

STATIONS AND VESSELS.	True course toward—	Hourly rate in knots.	*Barometer as reported.		Temperature of the Air.		Relative Humidity.	Wind.				Clouds.				Rain-fall or melted snow in the past 24 hours.		State of Ocean.	Direction of swell from—	Weather.	Observer.
								Direction.	Velocity		Force.	Amount.		Direction.							
												Up'er	Low'r	Up'er	Low'r						
			Inches.	Millimeters.	Fahrenheit.	Centigrade.	Per cent.	From—	Miles per hour.	Meters per second.	0—10.	0—10.	0—10.	From—	From—	Inches.	Millimeters.				
Naval Academy, Annapolis, Md.			30.02	762.5	26	— 3.3	70	N			1		9			0	0			Cloudy	
Naval Hospital, Annapolis, Md.			30.35	770.9	26	— 3.3	100	N			1		6		N	0	0				
Navy Yard, Mare Island, Cal.			30.28	769.1	46	7.8	100	E			2		7			0	0			Cloudy	
Navy Yard, Norfolk, Va.			30.44†	773.2†	35	1.7		N			2		8ks							‡D. clouds.	
Navy Yard, Pensacola, Fla.			30.27	768.8	59	15.0	94	NNE			1		10		S	0.875	22.23			Raining	
Navy Yard, Portsmouth, N.H.			30.16	766.1	23	— 5.0		WSW			2									Cloudy	
Adams, Port Royal, S. C.			30.33	770.4	52	11.1	86	N			3					0.05	1.3			Foggy	
Ajax, Port Royal, S. C.			30.26	768.6	48	8.9		N			2		10			Blank	Blank			Dense fog.	
Canonicus, New Orleans, La.			29.98†	761.5†	46	7.8		N			5		10							Rainy	
Catskill, Port Royal, S. C.			30.24†	768.1†	47	8.3		NNE			3		10					Rippling.		Rainy	
Colorado, New York, N. Y.			30.44	773.2	27	— 2.8		NNW			0–1		8			0.15	3.8			Hazy	
Dictator, Port Royal, S. C.			30.33	770.4	47	8.3	100	NNE			2					0.125	3.18			Rain & fog	
Essex, Norfolk, Va.			30.38	771.6	35	1.7	100	NNE			2		9		E					‡D. clouds	
Hartford, Hampton Roads, Va.			30.49	774.4	35	1.7		N			4		6		E	0.75	19.1			Rainy	
Huron, Port Royal, S. C.			30.37	771.4	52	11.1	93	NNE			2									Misty	
Lehigh, Port Royal, S. C.			31.05†	788.7†	44	6.7	92	NE			2		10		NE					Raining	
Manhattan, Port Royal, S. C.			30.30	769.6†	47	8.3		NE			3		10		S			Smooth		Misty	
Michigan, Erie, Pa.			30.15	765.8	12	—11.1	61	SSW			1		2		SSW					Clear	
Monongahela, Baltimore, Md.			30.34	770.6	32	0.0		S&W			0–1		c, k, n		N&E					Foggy	
New Hampshire, Port Royal, S. C.			30.50	774.7	51	10.6	100	NNE			2		Fog			Blank	Blank	Smooth		Dense fog	
Ossipee, New Orleans, La.			30.29	769.4	52	11.1		N			5		10		S					Thunder-storm	
Plymouth, Pensacola, Fla.			30.25	768.3	65	18.3	78	N			4		10		N	0.6	15.2	Smooth		Cloudy	
¶ Rio Bravo, Matamoras, Mex.			30.09	764.3	44	6.7	84	NW			2		9		NW					‡D. clouds	
Santee, Annapolis, Md.			29.92	760.0	28	— 2.2		N			1		9							Cloudy	
St. Louis, League Island, Pa.			30.21	767.3	25	— 3.9		NW			2		9		SE	0.20	5.1			Cloudy	
Tallapoosa, Washington, D. C.			30.25	768.3	25	— 3.9		Calm			0		7		N&W					‡D. clouds	
Wabash, Boston, Mass.			30.25	768.3	27	— 2.8		WNW			2		8		ESE					Hazy	
Wyoming, Washington, D. C.			30.80†	782.3†	25	— 3.9		Calm			0		4							‡D. clouds	

* It is not known that the barometer is corrected for temperature, instrumental error or elevation. † Aneroid Barometer. ‡ Detached clouds. ¶ Barometer corrected for instrumental error and reduced to sea-level.

UNITED STATES MARINE SERIES

REPORTED TO THE OFFICE OF THE CHIEF SIGNAL OFFICER OF THE ARMY.

NAMES OF VESSELS.	True course toward—	Hourly rate in knots.	Barometer reduced to sea-level.		Temperature of the Air.		Relative Humidity.	Wind.				Clouds.				State of Ocean.	Direction of swell from—	Weather.	Observer.
								Direction.	Velocity.		Force.	Amount.		Direction.					
												Up'er	Low'r	Upper.	Lower.				
			Inches.	Millimeters.	Fahrenheit.	Centigrade.	Per cent.	From—	Miles per hour.	Meters per second.	0—10.	0—10.	0—10.	From—	From—				
PACIFIC MAIL S. S. CO. MARINE SERIES. Furnished by the coöperation of ————, President; Williams, Blanchard & Co., Agents.																			
OCCIDENTAL AND ORIENTAL S. S. CO. MARINE SERIES. Furnished by the coöperation of George H. Bradbury, President; T. H. Goodman, Agent.																			
S. S. Belgic																			Capt. John Metcalf.
S. S. Gaelic																			Capt. W. H. Kidley.
S. S. Oceanic																			Capt. H. Parsell.
NORTH GERMAN LLOYD OF BREMEN MARINE SERIES. Furnished by the coöperation of A. Schumacher & Co., Agents.																			
Steamer Nürnberg, N. 42°, 5′, W. 56°, 6′	W½S		29.84	757.9	41.0	5.0		NE			3–5		..k		SW	Smooth		Clearing	Capt. A. Jaeger.
MARINE SERIES. (Miscellaneous.) Furnished by the coöperation of Captain James Jorgensen.																			
Schooner Addie Fuller, N. 32°, 35′, W. 78°, 58′	SW	5	30.23	767.8	53	11.7	93	NE	13	5.8			10d		NE	Rough.		Overcast	Capt. James Jorgensen.

NOTE.—The schooner Addie Fuller gives the amount of cloudiness by the scale 0 to 4.

COLLATED AT THE OFFICE OF THE CHIEF SIGNAL OFFICER OF THE ARMY, WASHINGTON, D. C.

The records which appear in this Bulletin are copied from the regular exchanges of this office, made in each instance in compliance with an especial request and are published for the uses of the coöperating observers. The barometric readings in the first two columns are reduced to freezing and their respective standards; those in the second two also to mean sea-level. The "weather" is generally published as given.

When the distinction between the upper and lower strata of clouds is not reported, the *kinds* or *types*, viz: cirrus, cumulus, stratus, nimbus, scud, fracto, pallio, haze, fog and smoke, as indicated, respectively, by the letters c, k, s, n, d, f, p, hz., fg. and sm'e, are generally published with the amount in the lower-cloud column. The distinction between the upper and lower strata is carefully made in the United States Series and a portion of the Canadian Series, and the types are indicated by the above letters or their combinations in the proper column.

Albert J. Myer

Brig. Gen. (Bvt. Assg^d.) Chief Signal Officer, U. S. A

BULLETIN

OF

INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON JANUARY 24, 1877.

7:35 A. M. WASHINGTON mean time.

6:7 A. M. MEXICO mean time.
7:7 A. M. SAN JOSE mean time.
0:6 P. M. LISBON mean time.
0:28 P. M. MADRID mean time.
0:48 P. M. GREENWICH mean time.
0:53 P. M. PARIS mean time.
1:1 P. M. BRUSSELS mean time.
1:4 P. M. UTRECHT mean time.
1:13 P. M. BERNE mean time.

1:26 P. M. CHRISTIANIA mean time.
1:33 P. M. COPENHAGEN mean time.
1:38 P. M. ROME mean time.
1:37 P. M. BERLIN mean time.
1:49 P. M. VIENNA mean time.
1:55 P. M. STOCKHOLM mean time.
2:18 P. M. ATHENS mean time.
2:39 P. M. CONSTANTINOPLE mean time.
2:44 P. M. ST. PETERSBURG mean time.

10:2 P. M. TOKEI mean time.

ALGERIAN SERIES.

Furnished by the coöperation of General d'Eudeville, Commandant Supérieur du Génie in Algeria.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Nemours			30.37	771.3	59.7	15.4	58	Calm			0		0			0	0	Clear	Charnot.
Algiers			30.35	770.9	49.6	9.8		WSW			1		3			0	0	Fair	Peter.
La Calle			30.13	765.4	57.2	14.0	63	NNW			3		4			0.236	6.0	Fair	Fleury.
Tunis			30.07	763.8	48.2	9.0		NNW			5		6			0.364	9.0	Fair	Jacques.
Sfax																			
Saida			30.31	769.9	53.4	11.9	35	NW			1		1			0	0	Clear	Millot.
Tebessa			30.23	767.7	35.2	1.8		NW			4		10			0	0	Hidden	Bourgeois.
Geriville			30.21	767.4	51.4	10.8	21	N			4		0			0	0	Clear	Lemaillot.
Laghouat			30.24	768.1	53.6	12.0	33	W			1		0			0	0	Clear	Guyot.
Biskra			30.23	767.7	62.1	16.7	47	NW			2		4			0	0	Fair	Kuntz.

NOTE.—In the originals the distinction between the amount of upper and lower clouds is apparently not made. The weather is published as given. The rain-fall is measured at 7 a. m., local time.

AUSTRIAN SERIES.

Furnished by the cooperation of Professor Ferdinand Osnaghi, Director of the Imperial and Royal Central Meteorological Institute at Vienna.

Agram			30.28	769.2	36.3	2.4	58	NE			2	4			0	0		Prof. Ivan Stoxir.
Cracow, I. R. Observatory			30.29	769.3	30.7	— 0.7	98	W			1	10			0.051	1.3		Dr. Wierzbiski.
Eperies			30.20	767.1	30.2	— 1.0	84	N			3	10k,s		S	0	0		Julius Mikolik.
Gratz	28.97	735.8	30.28	769 0	35.6	2.0	52	SW			3	0			0	0		Andreas Rospini.
Hermannstadt	28.67	728.2	30.19	766.8	26.4	— 3.1	85	E			1	10			0.150	3.80	Snowy	Prof. Reissenberger
Kremsmünster	28.90	734.0	30.33	770.3	28.3	— 1.8	80	NW			1	1			0	0		Prof. C. Wagner.
Lemberg			30.20	767.0	24.4	— 4.2	97	N			1	7			0.055	1.4		Dr. T. Stanecki.
Nylregyhaza																		Habzsuda Daniel.
Pola			30.24	768.1	41.4	5.2	43	NE			4	2cs			0	0		I.R. Hydrographic Office.
Szegedin			30.22	767.5	33.2	1.8	71	Calm			0	5			0	0		Karl Stancel.
Trieste			30.28	769.2	42.1	5.6	51	E			1	0			0	0	Clear	Prof. V. Farolfi.
Vienna			30.31	769.9	33.3	0 7	88	NW			1	5			0	0		I. R. Central Met. Obs'y.

NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 7 p. m., local time. The elevation of Gratz is 343.5 meters, or 1,126.9 feet; Hermannstadt, 407.8 meters, or 1,337.9 feet; Kremsmünster, 383.6 meters, or 1,258.5 feet.

BELGIAN SERIES.

Furnished by the cooperation of J. C. Houzeau, Director of the Royal Observatory at Brussels.

Arlon			30.34	770.5	27.9	— 2.3	100?	SW			0	10			0	0		Royal Observatory.
Brussels			30.18	766.6	36.9	2.7	87	WSW			4	10		WSW	0	0	Covered	
Furnes			30.15	765.7	37 6	3.1	91	SSW			2	3			0.087	2.2		
Maseyck			30.20	767.1	35.6	2.0	87	S			0	0			0.035	0 9		

NOTE.—In the originals, the weather is occasionally given in general notes.

BRITISH SERIES

Furnished by the coöperation of Robert H. Scott, Esq., Director of the Meteorological Office, London, Alexander Buchan, Secretary of the Scottish Meteorological Society, Edinburgh, and the respective Observers.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Aberdeen			29.86	758.4	41.0	5.0		SW	14	6.3			1			0.120	3.05	Blue sky	William Boswell.
Ardrossan			29.95	760.7	42	5.6		SW			3								William McNeil.
Armagh, Observatory			30.01	762.2	41.5	5.3		SSW	15	6.7			5					*D. clouds	S. Call, for Dr. Robinson.
Birr Castle, (Parsonstown)			29.032	737.32	44.4	6.9		SSW			1		3					*D. clouds	J. Dreyer.
Bradford			30.06	763.5	42.1	5.6		W			2		1			0.05	1.3	*D. clouds	J. McLandsborough.
Bridgetown, (Barbados)			30.07	763.8	81.0	27.2		NE			3		7					Raining	Sergt. J. F. Halanen, A.
Cambridge, Observatory			30.12	765.0	46.0	7.8		NW			2		1					*D. clouds	H. Todd. [H.C.
Cardington			30.15	765.8	43.0	6.1		N			2		2					Blue sky	John McLaren.
Carlisle																			T. Bell, for J. Cartmell.
Chatham, School M. E.			30.11	764.8	45.2	7.3		SW			1		8					Blue sky	Maj. C. N. Martin, R.E.
Dartmoor	28.73	729.7	30.28	769.1	41.6	5.3		NW			1		6			Blank	Blank	*D. clouds	R. E. Power.
Davos Platz, (Switzerland)	24.94	633.5			30.0	— 1.1	36	NE			1		0			0	0	Blue sky	Francis Redford, M. A.
Donaghadee			29.98	761.5	40	4.4		WSW			5		3					*D. clouds	J. Mac Gowan.
Dover			30.13	765.3	47	8.3		SW			2		5					½ clouded	J. Costello.
Eccles, (near Manchester)			30.09	764.3	45.4	7.4		W	8.6	3.8			6					*D. clouds	Thomas Mackereth.
Falmouth, Observatory			30.25	768.3	48.0	8.9		SW			1		9					Overcast	The Staff.
Fort Napier, (Natal)	27.55	699.8	29.79	756.7	87.3	30.7		N			2		9					*D. clouds	P'vt. G. Salmon, A. H. C
Free Town, (Sierra Leone)			29.91	759.7	83	28.3		N			0		5					*D. clouds	
Galway, Queen's College			29.86	758.4	44	6.7		S			3		10					Raining	Prof. A. H. Curtis.
Gibraltar, (Mediterranean)			30.29	769.4	61.8	16.6		E			2		1					Blue sky	Corpl. C. Aitken, A.H.C.
Glasgow, Observatory			29.92	760.0	40.9	4.9		WSW			1		2					Blue sky	Lewis Stuart.
Great Yarmouth			30.08	764.0	45	7.2		WNW			4		3					Hazy	G. T. Watson.
Greenwich, Royal Obs'y			30.16	766.1	45.6	7.6		WNW			2		4			Blank	Blank	*D. clouds	The Staff, for G. B. Airy.
Guernsey			30.23	767.8	48.5	9.2		NW			2		6					*D. clouds	Dr. S. E. Hoskins.
Helston			30.26	768.6	49	9.4		SW			4		4c,k			0.37	9.4	Fine	M. P. Moyle.
Holyhead			30.09	764.3	44	6.7		SW			4		0					Blue sky	John Tilston.
Kew, Observatory			30.16	766.1	45.8	7.7		WNW	18	8.0			4					*D. clouds	The Staff.
Kingstown			30.08	764.0	44	6.7		WSW			4		1					Blue sky	George Mitchell.
Leicester Museum			30.15	765.8	43.2	6.2		W			2		7					*D. clouds	Wm. J. Harrison, F.G.S.
Malta, (Mediterranean)			30.09	762.0	55.2	12.9		NW			3		6c					*D. clouds	Corp'l. P. Bravis, A.H.C.
Nairn			29.79	756.7	39	3.9		SW			1		0					Clear	W. D. Penny.
Nassau, (Bahamas)			30.14	765.5	74	23.3		SE			0		1					Drizzling	Surg. Maj. Henry.
Nottingham, Observatory			30.15	765.8	43.2	6.2		WSW			4		8k,d		WSW	0.082	2.08	*D. clouds	F. J. Lowe, F. R. S.
Oscott, St. Mary's College			30.13	765.3	42.7	5.9		W			3		8					*D. clouds	Rev. Stephen Whitty.
Oxford, Radcliffe Obs'y			30.16	766.1	44	6.7		W			3		7					*D. clouds	J. Lucas.
Plymouth			30.22	767.6	46.1	7.8		NW			1		10					Overcast	John Merrifield.
Roche's Point			30.12	765.0	47	8.3		SW			4		5					Cloudy	W. Kennedy.
Saint Ann's Head			30.15	765.8	46	7.8		W			2		5					*D. clouds	John C. Walker.
Saint Helier, (Jersey)			30.24	768.1	50.8	10.4		N			3		8					¾ clouded	A. P. Amy.
Sandwick Manse, (Orkneys)			29.72	754.9	39.6	4.2		WSW	24	10.7			2					*D. clouds	Rev. C. Clouston, LL. D.
Scarborough																			F. Shaw.
Scutari Cemetery, (Turkey)			29.99	761.7	40.6	4.8		NE			2		10					Showery	Sergt. W. H. Lyne.
Sheffield			30.10	764.5	46.2	7.9		W			2		7			0.208	5.28	Overcast	W. F. Cooper.
Silloth Rectory			30.02	762.5	45.0	7.2	69	SW			2		0			0.205	5.21	Blue sky	Rev. Francis Redford.
Stonyhurst, Observatory			30.08	764.0	41.5	5.3		W			3		8					Hazy	Rev. S. J. Perry.
Stornoway, Lews C., (Hebr.)			29.70	754.4	35	1.7		SW			3		8					*D. clouds	John Smith.
Stratfield Turgiss			30.18	766.6	45.8	7.7		NW			1		1					Blue sky	Rev. Charles H. Griffith.
Thurso			29.71	754.6	41	5.0		SW			3		2					Blue sky	John Trotter.
Truro, Royal Institution			30.22	767.6	45	7.2		NW			4		8					Gloomy	W. Newcombe.
Valencia, Observatory			29.82	757.4	46.0	7.8		SSW	35	15.6			10					Squally	The Staff.
SUB-SERIES.																			
Calf of Man, (Isle of Man)					42	5.6		W			6		3			0	0		Henry Mercer.
Cape Good Hope, Obs'y			29.96	761.0	76.9	24.9	53	SE	30	13.4		1	3						The Staff, for E. J. Stone.
Hobart Town, (Tasmania)			29.72	754.9	70.0	21.1	94	N			1		9kn			0	0		Francis Abbott, F.R.A.S.
Leith, Restalrig Park			29.96	761.0	40.5	4.7		W			3		8k			0.06	1.5	Cloudy	Andrew Gibb.
Mauritius, Observatory			29.97	761.2	83.6	28.7	64	N	8.5	3.8		2	7		N	0.18	4.6	*D. clouds	C. Meldrum.
Melbourne, Observatory			30.01	762.2	60.8	16.0	74	S	7	3.1			8			0	0	Fine	R. L. J. Ellery.
Monach L't-house, (Hebrides)			29.09	754.1	41	5.0		W			6		10			0.4	10.2		J. Youngclause.
North Unst, (Shetland Is.)			29.55	750.6	40	4.4		W			6		10			Blank	lank		Robert Burnet.

NOTE.—Generally, the originals do not give the relative humidity, rain-fall, or distinction between upper and lower clouds. The originals give the wind direction to 32 points and weather by the Beaufort notation. The originals give the barometer for Aberdeen, Cardington, Galway, Oxford, St. Helier, Sandwick, Scarborough, Stonyhurst, Leith, Monach and North Unst as read off and the cloudiness for Stornoway by the scale 0 to 4. The wind-force is given by the scale 0 to 12 in the official series; 0 to 6 in the sub-series; except in lbs. per square foot for Greenwich and Hobart Town. The rain-fall is measured at Aberdeen at 10 a. m.; Bradford, 9 a. m.; Hobart Town, 7:30 a. m.; Nottingham, 6 p. m.; Mauritius, 9 a. m., local time. The elevation of Dartmoor is 1,400 feet, or 426.7 meters; Davos Platz, 5,105? feet, or 1,556.0? meters; Fort Napier, 2,200 feet, or 670.6 meters. *Detached clouds.

By authority of the MINISTER OF FOREIGN AFFAIRS.

COSTA RICA SERIES.

Furnished by the coöperation of Senor Federico Maison, Director of the Central Office of Statistics and Meteorology.

San José																			

DANISH SERIES.

Furnished by the co peration of Captain N. Hoffmeyer, Director of the Royal Danish Meteorological Institute at Copenhagen.

Copenhagen			30.23	767.9	29.5	— 1.4	96	SSE			2		10					Foggy	
Fanöe			30.12	765.1	32.9	0.5	96	S			6		10						
Godthaab, (Greenland)			29.06	738.0	5.9	—14.5	87	Calm			0		8						
Stykkisholm, (Iceland)			28.89	733.7	28.2	— 2.1	94	S			4		10					Snowing	
Thorshavn, (Faröe)			29.47	748.6	39.2	4.0	63	SW			6		5						
Vestervig			30.04	763.0	32.0	0.0	96	SSE			6		10						

NOTE.—The originals give the wind-force by the scale 0 to 6; occasionally, weather by Vienna symbols; no distinction between the amount of upper and lower clouds.

FRENCH SERIES.

Furnished by the co-operation of His Excellency, U. J. Le Verrier, Director of the Paris Observatory, and the respective Observers.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Alençon	.....	.....	30.29	769.4	44.6	7	80	SW	.....	.....	1	.....	10	.....	.....	0	0	Covered	Normal School.
Amiens	.....	.....	30.24	768.0	34.9	1.6	71	NW	.....	.....	3	.....	10	.....	.....	0	0	Covered	Normal School.
Avignon	.....	.....	30.27	768.9	44.6	7	57	N	.....	.....	2	.....	0	.....	.....	0	0	Very clear...	Normal School.
Bar-sur-Seine	.....	.....	30.28	769.1	37.0	2.8	68	SSW	.....	.....	2	5c	.....	.....	.....	0	0	Cloudy.....	C. Saillard.
Beaumette, (near Angers)	.....	.....	30.26	768.7	42.3	5.7	91	N	2.0	0.9	.....	.....	.....	.....	NW	0	0	.....	Beaumette Observ'tory.
Beauvais	.....	.....	30.27	768.8	36.5	2.5	85	WSW	.....	.....	1	.....	10	.....	.....	0	0	Covered	Normal School.
Besançon	.....	.....	30.37	771.5	30.2	— 1	.....	SSW	.....	.....	3	.....	2	.....	S	0	0	Slightly cl'dy	Normal School.
Bourg en Bresse	.....	.....	30.40	772.2	29.5	— 1.4	92	SW	.....	.....	1	.....	.....	.....	.....	0	0	Foggy	Normal School.
Bourges	.....	.....	30.30	769.6	41.0	5	84	E	.....	.....	2	.....	2	.....	E	0	0	Slightly cl'dy	Normal School.
Brest	.....	.....	30.23	767.8	50.5	10.3	69	W	.....	.....	1	.....	10	.....	W	0	0	Misty.....	Naval Observatory.
Carcassonne	.....	.....	30.35	770.8	49.1	9.5	64	W	.....	.....	.....	.....	5	.....	E	0	0	Cloudy.....	Normal School.
Caen	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Chartres	.....	.....	30.26	768.7	37.2	2.9	62	SSW	.....	.....	2	.....	10	.....	.....	0	0	Covered	Normal School.
Châlons-sur-Marne	.....	.....	30.27	768.9	34.7	1.5	85	S	.....	.....	4	.....	2ck	.....	SE	0	0	Slightly cl'dy	Normal School.
Clermont	.....	.....	30.32	770.0	41.4	5.2	54	SW	.....	.....	1	.....	0	.....	.....	0	0	Clear.....	Puy de Dome Obs'y.
Commercy	.....	.....	30.30	769.6	31.5	— 0.3	88	SSE	.....	.....	1	.....	8ns	.....	S	0	0	Cloudy.....	Normal School.
Commune de Gréasque*	.....	.....	30.26	768.6	49.5	9.7	50	NW	.....	.....	2	.....	2	.....	NW	0	0	.....	M. Kina.
Grenoble	.....	.....	30.32	770.1	38.1	3.4	72	SE	.....	.....	1	.....	0	.....	.....	0	0	Clear.....	Normal School.
La Roche-sur-Yon	.....	.....	30.36	771.2	45.7	7.6	94	E	.....	.....	1	.....	10	.....	.....	0	0	Covered	Normal School.
Le Mans	.....	.....	30.30	769.7	35.8	2.1	93	SW	.....	.....	3	.....	10	.....	.....	0	0	Covered	Normal School.
Lons-Le-Saulnier	.....	.....	30.32	770.0	32.2	0.1	93	SW	.....	.....	1	.....	10	.....	.....	0	0	Covered	Normal School.
Lorient	.....	.....	30.32	770.1	52.9	11.6	59	NW	.....	.....	1	.....	10	.....	.....	0.028	0.7	Covered	Naval Observatory.
Mâcon	.....	.....	30.35	771.0	30.2	— 1	.....	N	.....	.....	1	.....	.....	.....	.....	0	0	Foggy	Normal School.
Metz	.....	.....	30.34	770.6	29.7	— 1.3	85	E	.....	.....	2	.....	10	.....	.....	0	0	.....	M. Schuster.
Mirecourt	.....	.....	30.36	771.2	30.9	— 0.6	92	N	.....	.....	2	.....	10	.....	S	0	0	Covered	Normal School.
Nismes	.....	.....	30.24	768.2	50.7	10.4	72	E	.....	.....	1	.....	0	.....	.....	0	0	Clear	Normal School.
Orleans	.....	.....	30.26	768.5	36.3	2.4	86	SW	.....	.....	2	.....	10	.....	.....	0	0	Covered	Normal School.
Paris, Observatory	.....	.....	30.27	768.9	33.8	1.0	85	SSW	.....	.....	1	.....	10	.....	.....	.....	.....	Light rain...	National Observatory.
Parthenay	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Privas	.....	.....	30.32	770.0	38.8	3.8	.....	SE	.....	.....	2	.....	0	.....	.....	0	0	Clear	Normal School.
Rochefort, Observatory	.....	.....	30.31	769.9	46.9	8.3	88	S	.....	.....	3	.....	10	.....	E	0	0	Covered	Naval Observatory.
Rouen	.....	.....	30.24	768.0	37.6	3.1	51	E	.....	.....	3	.....	10	.....	.....	0	0	Covered	Normal School.
Saint Lo	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Tarbes	29.31	744.4	30.42	772.6	50.0	10	87	W	.....	.....	2	.....	5	.....	E	0	0	Cloudy.....	Normal School.
Villefranche	.....	.....	30 562	776.1?	33.1	0.6	91	NE	.....	.....	1	.....	10	.....	.....	0	0	Covered	Normal School.
Sub-Series.																			
Fort de France, Martinique	.....	.....	29.94	760.5	77.7	25.4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	L'Abbé Marchési.
Marseilles	.....	.....	30.22	767.6	50.0	10.0	53	W	.....	.....	1	.....	1	.....	.....	0	0	Partly cl'dy.	Marseilles Observatory.
Mont-Louis	25.05	636.2	30.36	771.2	43.2	6.2	10	NNW	11.2	5.00	.....	.....	2	.....	NW	0	0	.....	—. Falgnère.
Montsouris, Paris	.....	.....	30.24	768.2	32.9	0.5	92	S	.....	.....	2	.....	10	.....	.....	0	0	.....	Montsouris Observatory
Perpignan	.....	.....	30.26	768.5	55.9	13.3	49	N	20.5	9.17	.....	.....	0	.....	.....	0	0	.....	Dr. Fines.
Pic du Midi, (Summit,) H. P.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. Baylac.
Pic du Midi, (Plantade,) H. P.	22.63	574.7	.....	.....	35.6	2.0	.....	N	.....	.....	2	.....	1	.....	.....	0	0	Clear	General de Nansouty.
Saint Maur, (near Paris)	.....	.....	30.26	768.6	32.9	0.5	90	S	.....	.....	1	.....	10	.....	.....	0	0	Covered	E. Renou.
Toulouse	.....	.....	30.39	771.8	45.3	7.4	82	SE	.....	.....	1	.....	7	.....	.....	0	0	.....	Toulouse Observatory.
Tours	.....	.....	30.28	769.2	38.1	3.4	87	WSW	.....	.....	1	.....	10	.....	.....	0	0	Misty.....	C. Marquet.
Versailles, (near Paris)	.....	.....	30.24	768.2	34.5	1.4	100	W	.....	.....	1	.....	10	.....	.....	0.006	0.14	Rain & fog...	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai)	.....	.....	30.25	768.4	42.6	5.9	97	NW	14.9	6.67	.....	.....	10	.....	.....	0.043	1.1	.....	Marc Dechevrens, S. J.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—Generally, the originals give the wind-force by the scale 0 to 7; no distinction between upper and lower clouds, and, in the official series, the amount by the scale 0 to 4; the rain-fall as measured at 7, 8 or 9 a. m., local time; at Clermont, 9 a. m. of the following day; the weather in general terms as published. The elevation of Clermont is 388 meters, or 1,272.9 feet; Commune de Gréasque, 322 meters, or 1,056.4 feet; Tarbes, 308 meters, or 1,010 feet; Mont-Louis, 1,586.40 meters, or 5,204.8 feet; Pic du Midi, (Summit,) 2,877 meters, or 9,439.1 feet; Pic du Midi, (Plantade,) 2,366 meters, or 7,762.6 feet. In correcting the Mont-Louis barometric observations for altitude, the constant 135. millimeters has been added. *Bouches-du-Rhône

GERMAN SERIES.

Furnished by the coöperation of Professor Dr. G. Neumayer, Director of the German Naval Observatory, Hamburg.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Bamberg	.....	.....	30.32	770.2	32.9	0.5	82	SE	.....	.....	1	.....	9	SE	.....	0	0	.....	Prof. T. Hoh
Berlin	.....	.....	30.30	769.7	37.2	2.9	68	SW	.....	.....	1	.....	7	.....	.....	0	0	.....	Prof. Arndt.
Breslau	.....	.....	30.32	770.2	27.0	— 2.8	69	NW	.....	.....	1	.....	10	.....	.....	0	0	.....	Royal University Obs'y.
Carlsruhe	.....	.....	30.31	769.8	28.0	— 2.2	96	S	.....	.....	1	.....	10	.....	.....	0	0	.....	A. Senz.
Cassel	.....	.....	30.28	769.1	32.7	0.4	83	S	.....	.....	3	.....	7	S	.....	0	0	.....	Dr. H. Möhl.
Crefeld	.....	.....	30.19	766.7	35.2	1.8	75	SE	.....	.....	5	.....	3	.....	.....	0	0	.....	Director Lose.
Emden	.....	.....	30.24	768.2	36.1	2.3	91	S	.....	.....	1	.....	1	.....	.....	0.043	1.1	.....	Prof. Prestel.
Frankfort on the Main	.....	.....	30.34	770.5	32.9	0.5	70	SSE	.....	.....	2	.....	9	.....	.....	0	0	.....	Physical Society.
Friedrichshafen	28.85	732.9	30.39	771.9	25.7	— 3.5	83	NE	.....	.....	6	.....	10	.....	.....	0.016	0.4	Raining.....	M. Wilhelm.
Hamburg	.....	.....	30.22	767.5	36.0	2.2	82	SSE	.....	.....	3	.....	2s	.....	.....	0.043	1.1	Clear	Captain F. Hegemann.
Kiel	.....	.....	30.19	766.9	32.4	0.2	91	SE	.....	.....	3	.....	10	.....	.....	0	0	.....	Prof. G. Karsten.
Königsberg, (Prussia)	.....	.....	30.20	769.3	31.6	— 0.3	75	SW	.....	.....	2	.....	5	.....	.....	0.004	0.1	Snowing.....	Prof. E. Luther.
Köslin	.....	.....	30.33	770.3	29.1	— 1.6	.....	Calm	.....	.....	0	.....	10	.....	.....	0	0	.....	H. Müller.
Leipsic	.....	.....	30.32	770.1	35.2	1.8	71	SSW	.....	.....	2	.....	7	WSW	.....	0	0	.....	Prof. Bruhns.
Memel	.....	.....	30.29	769.3	30.0	— 1.1	90	S	.....	.....	2	.....	10ks	.....	.....	0	0	.....	Reinbrecht & Skalweit.
Münster	.....	.....	30.19	766.7	36.1	2.3	82	SE	.....	.....	1	.....	0	.....	.....	0	0	.....	Prof. E. Heis.
Neufahrwasser	.....	.....	30.30	769.5	34.2	1.2	82	W	.....	.....	1	.....	8	.....	.....	0	0	.....	A Lothe.
Posen	.....	.....	30.34	770.5	29.5	— 1.4	87	NW	.....	.....	3	.....	10	.....	.....	0	0	.....	Dr. Magener.
Strassburg, (in Alsace)	.....	.....	30.35	770.8	29.7	— 1.3	88	NE	.....	.....	1	.....	10	.....	.....	0	0	.....	Dr. Schur.
Stuttgart	.....	.....	30.33	770.4	32.4	0.2	92	SE	.....	.....	1	.....	2	.....	.....	0.008	0.2	.....	Prof. Schoder.
Thorn	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Dr. Hasenbalg.
Treves, (Trier)	.....	.....	30.23	767.8	30 9	— 0.6	86	NE	.....	.....	1	.....	10	.....	.....	0	0	Foggy.....	Prof. Flesch.
Weissenburg, (Bavaria)	28.74	730.1	30.35	770.9	28.4	— 2.0	86	WSW	.....	.....	3	.....	10	SW	.....	0	0	.....	Dr. von Bebber.
Wustrow, Naval School	.....	.....	30.34	770.6	31.1	— 0.5	90	SSE	.....	.....	3	.....	10	.....	.....	0	0	Foggy.....	E. F. Schütz.
German Naval Series.																			

NOTE.—The elevation of Friedrichshafen is 413.4 meters, or 1,356.3 feet; Weissenburg, 431 meters, or 1,414.0 ft. In the originals the distinction between the amount of upper and lower clouds is not made. It is not always certain that the remarks in the weather column refer to the moment of observation.

GREEK SERIES.

Furnished by the cooperation of Professor Dr. J. F. Julius Schmidt, Director of the Royal Observatory at Athens.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Athens			29.92	760.0	45.9	7.7		NE			Very strong							Cloudy	

Note.—The originals give the barometer corrected, but not reduced to sea-level; occasionally the kind of clouds; the weather as published. They omit the humidity, wind-force, amount of cloudiness and rain-fall.

ITALIAN SERIES.

Furnished by the cooperation of His Excellency the Minister of Agriculture, Industry and Commerce, and the respective Observers.

Udine			30.26	768.5	40.1	4.5	45	Calm	0	0		6				0	0		Prof. Giovanni Clodig.
Stelvio	22.12	561.9			18.5	— 7.5		SE			1	0				0	0		Signora Ernesta Manfredi.
Valdobbia	22.18	563.3			23.2	— 4.9	57	WNW			4	4		N		0	0		Ab. Dom. Mongini.
Padua			30.27	768.9	36.1	2.3	70	N	4.3	1.9		10		W		0	0		Prof. Dott. Lorenzoni.
Vicenza			30.28	769.0	37.8	3.2	67	N	0.7	0.3		9		W		0	0		Conte Alm. Da Schio.
Verona			30.27	768.8	38.5	3.6	82	W			1	10				0	0		Dott. B. Bertoncelli.
Bergamo	28.87	733.2	30.24	768.0	38.8	3.8	62	ESE			2	2				0	0		Prof Trionfini Carlo.
Domodossola			30.25	768.3	41.0	5.0	54	SW			4	1				0	0		Prof. Giuseppe Calza.
Milan			30.26	768.5	40.8	4.9	76	N			1	1				0	0		Ab. Gio. Capelli
Pavia			30.28	769.1	35.1	1.7	91	ESE			1	10				0	0		Prof. Gio. Cantoni.
Moncalieri			30.25	768.4	40.3	4.6	82	N	2.5	1.1		1				0	0		Prof. P. F. Denza.
Mondovi	28.26	717.9	30.25	768.4	38.3	3.5	56	NW			2	1		N		0	0		Prof. D. C. Bruno.
Porto Maurizio			30.26	768.7	51.6	10.9	40	SSE			2	1				0	0		Prof. L. Vassallo.
Genoa			30.21	767.4	53.1	11.7	40	S	0.7	0.3		0				0	0		Prof. G. M. Garibaldi.
Piacenza			30.28	769.0	35.8	2.1	89	N	2.5	1.1		5		N		0	0		Dott. G. Manzi.
Parma			30.26	768.7	41.5	5.3	75	E			2	0				0	0		Prof. P. Pigorini.
Florence			30.25	768.3	45.5	7.5	47	NE			2	1				0	0		Cav. F. Meucci.
Leghorn			30.23	767.9	45.7	7.6	45	ENE	9.8	4.4		4		NE		0	0		Prof. P. Monte.
Siena	28.96	735.5	30.21	767.3	42.6	5.9	40	ENE	1.8	0.8		6		N		0	0		Prof. L. Toscani.
Urbino	28.66	727.9	30.29	769.3	37.2	2.9	62	NE			4	8				0	0		Prof. P. Serpieri.
Pesaro			30.26	768.7	43.7	6.5	52	NNE	39.1	17.5		5		NW		0	0		Prof. Luigi Guidi.
Ancona			30.23	767.9	45.0	7.2	54	NW			2	2		NW		0	0		Prof. F. De— Bosis.
Grosseto			30.23	767.8	47.7	8.7	46	NNE			4	2		SE		0	0		Avv. P. Ponticelli.
Rome			30.12	765.1	50.0	10.0	32	N	16.8	7.5		0				0	0		Prof's. P. Secchi & L. Respighi.
Naples, O. U.			30.10	764.6	52.2	11.2	37	NE			4	5		N		0	0		Prof. L. Palmieri.
Lecce			30.03	762.7	48.2	9.0	52	NNE	18.1	8.1		6				0	0		Prof. C. De—Giorgi.
Cosenza			30.08	763.9	47.1	8.4	68	ENE	12.5	5.6		9				0	0		Prof. F. D. Conti.
Cagliari																			Prof. A. Pacinotti.
Riposto, (Sicily)			29.99	761.8	51.1	10.6	68	NE			4	8		SW		0	0		Prof. F. Caltero.
Palermo			30.04	763.1	53.1	11.7	52	N	6.3	2.8		7				0.217	5.5	Raining	Prof. G. Cacciatore.
Caltanissetta	28.00	711.3	30.05	763.3	44.1	6.7	71	WNW			6	5		S					Prof. A. Pagani.
Siracusa			29.98	761.5	53.1	11.7	56	NNE			4	10		NNE		0.01	0.3	Light rain	Prof. V. Giuliano.
Sub-Series.																			
Naples, S. R.			30.12	765.1	48.2	9.0	44	NE	1.8	0.8		3		E		0	0		Prof. F. Brioschi

Note.—The originals give the wind-force by the scale 0 to 4, or the velocity in kilometers per hour; generally, no distinction between upper and lower clouds; occasionally the weather by the Vienna symbols. The elevation of Stelvio is 2,543.0 meters, or 8,342.9 feet; Valdobbia, 2,548.0 meters or 8,359.3 feet; Bergamo, 379.6 meters, or 1,244.3 feet; Mondovi, 556 meters, or 1,824.2 feet; Siena, 348.5 meters, or 1,143.3 feet; Urbino, 451 meters, or 1,479.7 feet; Caltanissetta, 570.3 meters, or 1,871.0 feet.

JAPANESE SERIES.

Furnished by the coöperation of the Imperial University of Tokei, Japan.

Tokei			30.60	774.7	33	0.6		Calm	0	0		2				0	0		Prof. P. V. Veeder.

Note.—The originals give the amount of cloudiness by the scale 0 to 4 without distinguishing between upper and lower clouds. The rain-fall is measured at 7 a. m., local time.

MEXICAN SERIES.

By authority of the Secretary of Public Works.

Furnished by the coöperation of Senor Mariano Barcena, Director of the Central Meteorological Observatory in the City of Mexico.

Mexico																			Mariano Barcena. Vicente Reyes. Miguel Perez. (Engineers in charge.)

Note.—The elevation of Mexico is 2,293 meters, or 7,512.9 feet. The rain-fall is measured at 6 a. m., local time.

NETHERLANDS' SERIES.

Furnished by the cooperation of Professor Buys Ballot, Director of the Royal Meteorological Institute of the Netherlands at Utrecht.

Flushing			30.19	766.8	35.6	2.0		SW			4					0	0		
Groningen			30.09	764.2	34.9	1.6		S			4					0	0		
Heider			30.08	764.0	39.2	4.0		SSW			4					0.114	2.9		
Utrecht			30.12	765.0	35.8	2.1	73	SSW			4		10			0.008	0.2	Dull	

Note.—The originals give the wind-pressure in kilograms per square meter; for Utrecht, they give the weather as published, from which the amount of cloudiness is taken by the scale 0 to 4, without distinguishing between upper and lower clouds. It is assumed that the barometer readings have been reduced to sea-level.

NORWEGIAN SERIES.

Furnished by the cooperation of Professor H. Mohn, Director of the Royal Norwegian Meteorological Institute at Christiania.

Bergen			29.78	756.4	43.2	6.2	56	S	43.4	19.4		10				0.256	6.5		
Brönö			29.73	755.1	43.5	6.4	37	SE	8.9	4		5							
Christiania			30.10	764.4	29.7	— 1.3	100	Calm	0	0		10				0.031	0.8	Foggy	
Tromsö			29.69	754.2	33.8	1.0	68	Calm	0	0		4				0	0		

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols. The loudiness and weather at Bergen refer to 2h., p. m., local time, instead of 1h., 4 m....

PORTUGUESE SERIES.

Furnished by the coöperation of J. C. de Brito Capello, Director of the Meteorological Observatory of the Infante Don Luiz at Lisbon.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Angra, (Azores)	.....	.....	30.29	769.4	55.8	13.2	84	W	7.4	3.3	.....	.....	7	.....	.....	0	0	.....	Dr. J. A. Sampaio.
Campo Major	.....	.....	30.39	772.0	58.1	14.5	63	E	2.8	1.25	.....	.....	1	.....	.....	0	0	.....	Dr. A. M. R. dos Santos.
Funchal, (Madeira)	.....	.....	30.21	767.2	67.8	19.9	56	E	9.6	4.30	.....	.....	5	.....	.....	0	0	.....	Capt. D. A. de Cunha.
Lisbon	.....	.....	30.38	771.6	53.4	11.9	80	NNE	7.4	3.3	.....	.....	1	.....	.....	0	0	.....	The Observatory.
Ponta Delgada, (Azores)	.....	.....	30.32	770.0	61.2	16.2	79	SE	0.7	0.3	.....	.....	4	.....	.....	0	0	.....	
.....																			

Note.—The originals give the wind-velocity in kilometers per hour; occasionally, the weather by the Vienna symbols; the amount of cloudiness without distinguishing between upper and lower clouds; the barometer corrected but not reduced to sea-level. The rain-fall at Libson is measured at noon, instead of 0 h. 6 m., p. m.

RUSSIAN SERIES.

Furnished by the coöperation of Professor H. Wild, Director of the Imperial Central Physical Observatory of Russia, at St. Petersburg.

Warsaw	.....	.....	30.27	768.9	30.0	— 1.1	90	NNW	2	1	.....	.....	10	.....	.....	.....	.....	.....	Astronomical Obs.
Wilna	.....	.....	30.34	770.6	26.8	— 2.9	70	Calm	0	0	.....	.....	10	.....	.....	.....	.....	.....	Astronomical Obs.
Dorpat	.....	.....	30.35	770.8	29.1	— 1.6	92	S	2	1	.....	.....	10	.....	.....	.....	.....	.....	Physical Cabinet.
St. Petersburg	.....	.....	30.34	770.6	27.7	— 2.4	85	SSE	4	2	.....	.....	10	.....	.....	.....	.....	.....	Central Physical Obs.
Kuopio	.....	.....	30.30	769.7	7.2	—13.8	.....	Calm	0	0	.....	.....	10	.....	.....	.....	.....	Foggy	Ch. Forsten.
Kieff	.....	.....	30.30	769.5	14.2	— 9.9	90	ENE	4	2	.....	.....	5	.....	.....	.....	.....	Light smoke-haze	Physical Cabinet.
Nikolaiev	.....	.....	30.26	768.6	17.1	— 8.3	67	NE	13	6	.....	.....	0	.....	.....	.....	.....	.....	Kurdakof.
Kertch	.....	.....	30.11	764.8	27.5	— 2.5	96	NNE	16	7	.....	.....	8	.....	.....	.....	.....	.....	Lagorio.
Moscow	.....	.....	30.43	772.9	12.6	—10.8	93	NW	7	3	.....	.....	10	.....	.....	.....	.....	Light snow..	Meteorological Obs.
Lugan	.....	.....	30.24	768.0	2.3	—16.5	65	SW	7	3	.....	.....	0	.....	.....	.....	.....	.....	Meteorological Obs.
Archangel	.....	.....	30.08	764.1	24.1	— 4.4	91	NW	13	6	.....	.....	10	.....	.....	.....	.....	.....	Ogorodnikof.
Tiflis	28.63	727.2	30.08	764.1	44.6	7.0	62	SSE	9	4	.....	.....	5	.....	.....	.....	.....	.....	Physical Observatory.
Astrakhan	.....	.....	30.21	767.4	21.2	— 6.0	74	NE	4	2	.....	.....	1	.....	.....	.....	.....	.....	Sebastianof.
Kasan	.....	.....	30.37	771.4	— 8 1	—22.3	91	S	2	1	.....	.....	7	.....	.....	.....	.....	.....	Physical Cabinet.
Orenburg	.....	.....	30.00	762.1	— 1.3	—18.5	72	E	13	6	.....	.....	10	.....	.....	.....	.....	Snowing.....	Tschernischei.
Ekaterinburg	29.23	742.4	30.28	769.0	5.2	—14.9	82	SW	11	5	.....	.....	5	.....	.....	.....	.....	.....	Meteorogical Obs.
Nukuss	.....	.....	30.21	767.3	21.9	— 5.6	96	NNE	2	1	.....	.....	10	.....	.....	.....	.....	.....	
Kasaly	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Bobrof.
Tashkend	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Michelson.
Barnaul	.....	.....	30.50	774.8	— 2.7	—19.3	69	S	0	4	.....	.....	10	.....	.....	.....	.....	.....	Meteorological Obs.
Yeniseisk	.....	.....	29.98	761.6	7.3	—13.7	84	S	4	2	.....	.....	10	.....	.....	.....	.....	Snowing.....	Marks.
Irkutsk	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Usolzef.
Peking, (China)	.....	.....	30.64	778.2	19.0	— 7.2	29	NNW	20	9	.....	.....	3	.....	.....	.....	.....	.....	Physical Observatory.
Nertchinsk	28.33	719.5	30.78	781.8	—24.2	—31.2	86	Calm	0	0	.....	.....	0	.....	.....	.....	.....	.....	Meteorological Obs.
Vladivostock	.....	.....	30.46	773.6	28.4	— 2.0	78	SE	16	7	.....	.....	10	.....	.....	.....	.....	Lunar corona	
Nikolaievsk, on the Amoor	.....	.....	.....	.....	—20.6	—29.2	.....	Calm	0	0	.....	.....	0	.....	.....	.....	.....	.....	
.....																			
.....																			
.....																			

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols; they omit the rain-fall. The elevation of Tiflis is 409 meters, or 1,341.8 feet; Ekaterinburg, 306.4? m., or 1,005.2? ft.; Tashkend, 494.2? m., or 1,621.3? ft.; Irkutsk, 392 m., or 1,286 ft.; Nertchinsk, 592.0? m., or 1,942.2? ft.

SPANISH SERIES.

Furnished by the coöperation of Antonio Aguilar, Director of the Royal Observatory at Madrid, and of Don Cecilio Pujazon, Captain R. N. Director of the Naval Observatory at San Fernando.

Madrid	.....	.....	30.44	773.2	42.6	5.9	97	SW	0.7	0.33	.....	1	0	N	.....	0	0	Almost clear	Royal Observatory.
San Fernando	.....	.....	30.35	770.8	62.2	16.8	59	E	10.3	4.6	.....	0	0	.....	.....	.....	.....	.....	Naval Observatory.
.....																			
.....																			
.....																			
.....																			

Note.—The originals give the weather in general terms, as published; rain-fall for San Fernando from preceding to following midnight; wind-velocity for Madrid in kilometers per hour.

SWEDISH SERIES.

Furnished by the coöperation of Professor R. Rubenson, Director of the Royal Swedish Meteorological Institute, at Stockholm, and of Dr. H. H. Hildebrandsson, Chief of the Meteorological Division of the Upsala Observatory.

Haparanda	.....	.....	30.20	767.0	9.7	—12.4	92	S	.....	.....	2	.....	7	.....	.....	0	0	.....	
Umea	.....	.....	30.18	766.6	14.4	— 9.8	94	Calm	.....	.....	0	.....	7	.....	.....	0	0	.....	
Hernosand	.....	.....	30.12	765.0	21.6	— 5.8	93	S	.....	.....	2	.....	7	.....	.....	0	0	.....	
Stockholm	.....	.....	30.21	767.2	26.6	— 3.0	100	Calm	.....	.....	0	.....	1	.....	.....	0	0	Foggy	
Wisby	.....	.....	30.24	768.0	30.6	— 0.8	88	ESE	.....	.....	2	.....	0	.....	.....	0	0	.....	
Sub-Series.																			
Upsala	.....	.....	30.21	767.2	18.5	— 7.5	96	SE	0	0	.....	.....	0	.....	.....	0.001	0.03	.....	Dr. Hildebrandsson.
.....																			

Note.—The originals give the wind-force by the scale 0 to 6, and Upsala also velocity in meters per second; occasionally, the weather by the Vienna symbols, or in general terms; no distinction between the amount of upper and lower clouds. The rain-fall is measured at 8 a. m., local time.

SWISS SERIES.

Furnished by the coöperation of Professor R. Wolf, Director of the Observatory at Zurich, and of Professor E. Plantamour, Director of the Observatory at Geneva.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Geneva	28.86	733.0	30.35	770.8	33.8	1.0	76	N	.....	.....	1	.....	9	.....	.....	0	0	Covered	The Observatory.
Zurich	28.63	727.3	30.36	771.2	28.4	— 2.0	78	W	.....	.....	1	.....	9	.....	.....	0	0	Covered	The Observatory.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—For Geneva the corresponding departures from the normal values are: Barometer, +5.6 mm; Thermometer, —0.8 cent.; Relative Humidity, —1 per cent.

NOTE.—The rain-fall is measured at Zurich at 7 a. m. on the following day. The originals give the barometer corrected but not reduced to sea-level; the wind-force by the scale 0 to 4 for Zurich; the amount of cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The elevation of Geneva is 408 meters, or 1,339 feet, and that of Zurich 470 meters, or 1,542 feet.

TURKISH SERIES.

Furnished by the coöperation of A. Coumbary, Effendi, Director of the Central Observatory at Constantinople, and of Professor C. V. A. Van Dyck, Superintendent of the Lee Observatory at Beirut.

Constantinople	.....	.....	30.03	762.8	40.5	4.7	76	NNE	16	7.0	.....	.....	10	.....	NNE	0	0	.....	
Fao, (Persian Gulf)	.....	.....	30.28	769.1	62.6	17.0	.....	NW	.....	.....	1	.....	0	.....	.....	.....	.....	.....	
Salonica	.....	.....	30.13	765.2	45.7	7.6	.....	NW	.....	.....	2	.....	5	.....	.....	.....	.....	.....	
Valona	.....	.....	29.87	758.8	49.5	9.7	.....	NW	.....	.....	2	.....	0	.....	.....	.....	.....	.....	
Varna	.....	.....	30.24	768.0	26.6	— 3.0	.....	NE	.....	.....	4	.....	10	.....	.....	.....	.....	.....	
SUB-SERIES.																			
Beirut, (Syria,) Lee Obs'y	.....	.....	29.90	759.4	63.1	17.3	53	SW	.....	.....	4	.....	8c	.....	.....	0.30	7.6	*D. clouds.....	Prof. C. V. A. Van Dyck.

NOTE.—The originals give the wind-force by the scale 0 to 7, (except Beirut, by the scale 0 to 12, and Constantinople velocity in meters per second;) the weather in general terms as published; no distinction between upper and lower clouds, and, except Constantinople and Beirut, the amount by the scale 0 to 4. It is assumed that the barometer is reduced to sea-level. * Detached clouds.

CANADIAN SERIES.

Furnished by the coöperation of Professor G. T. Kingston, Director of the Magnetic Observatory at Toronto, and Superintendent of the Meteorological Office of the Dominion of Canada, and the respective Observers. Those marked with a star (*) are also telegraphed daily to the office of the Chief Signal Officer, U. S. Army.

Bathurst, N. B	.....	.....	29.76	755.9	2.5	—16.4	86	SW	7	3.1	.....	.....	10	.....	.....	.....	.....	.....	Hon. J. Ferguson.
Brockville, Ontario	.....	.....	29.80	756.9	13	—10.6	.....	SW	8	3.6	.....	.....	10s	.....	SW	0.11	2.8	Light snow..	W. R. Bigg.
*Chatham, N. B	.....	.....	29.83	757.7	— 7	—21.7	100	SW	1	0.4	.....	.....	Haze	.....	.....	0	0	Cloudy.....	G. A. Blair.
Charlottetown, P. E. Island	.....	.....	29.91	759.7	5	—15.0	75	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	H. J. Cundall, C. E.
Cornwall, Ontario	.....	.....	29.74	755.4	13.9	—10.1	87	W	.....	.....	2	.....	10n	.....	.....	0.04	1.0	Snowing.....	James Smith, M. A.
Dalhousie, N. B	.....	.....	29.79	756.7	.....	.....	.....	S	.....	.....	1	.....	.....	.....	.....	0	0	Threatening	H. A. Johnson.
Esquimault, B. C	.....	.....	30.28	769.1	37.6	3.1	72	N	.....	.....	.....	9cs	0	.....	.....	0	0	Cloudy.....	W. H. Bevis.
Fredericton, N. B	.....	.....	29.87	758.7	—11.9	—24.4	95	Calm	0	0	.....	.....	10s	.....	W	0	0	Cloudy.....	Prof. Harrison.
*Fort Garry, Manitoba	.....	.....	30.48	774.2	—18	—27.8	93	W	11	4.9	.....	0	0	.....	.....	0	0	Clear	James Stewart.
Goderich, Ontario	.....	.....	30.08	764.0	13.2	—10.4	73	NW	.....	.....	3	4k	2s	NW	.....	0.25	6.3	Fair	H. J. Strang, M. A.
Granton, Ontario	28.82	732.0	30.02	762.5	10.6	—11.9	.....	W	.....	.....	3	2cs	0	.....	.....	0	0	Clear	James Grant.
*Halifax, N. S	.....	.....	29.92	760.0	13	—10.6	90	W	2	0.9	.....	.....	10ks	.....	W	0	0	Cloudy.....	F. Allison, M. A.
Hamilton, Ontario	.....	.....	30.00	762.0	15.4	— 9.2	86	SW	.....	.....	3	0	0	.....	.....	0	0	Clear.....	G. Dickson.
Heart's Content, N. F	.....	.....	29.98	761.5	19	— 7.2	69	W	.....	.....	1	3k	3	W	.....	0.05	1.3	Cloudy	E. Weedon.
*Kingston, Ontario	.....	.....	29.88	758.9	13	—10.6	89	W	4	1.8	.....	.....	10s	.....	W	0.05	1.3	Cloudy	S. Woods, M. A.
*Montreal, Quebec	.....	.....	29.69	754.1	16	— 8.9	91	SW	13	5.8	.....	.....	10n	.....	.....	0.04	1.0	Light snow..	C. H. McLeod, C. E.
*Ottawa, Ontario	.....	.....	29.71	754.6	12	—11.1	80	W	10	4.5	.....	.....	10n	.....	SW	0.10	2.5	Light snow..	J. B. Haney.
*Parry Sound, Ontario	.....	.....	29.92	760.0	6	—14.4	71	N	12	5.4	.....	0	0	.....	.....	0.14	3.6	Clear.....	Rev. R. Mosley.
Port Dover, Ontario	.....	.....	29.99	761.7	15	— 9.4	89	W	15	6.7	.....	.....	10n	.....	W	Inap.	Inap.	Threatening	H. Morgan.
Port Hastings, N. S	.....	.....	29.95	760.7	19.0	— 7.2	.....	Calm	0	0	.....	.....	.....	.....	.....	0	0	Fine.....	Peter Grant.
Port Stanley, Ontario	.....	.....	30.03	762.7	15	— 9.4	92	W	24	10.7	.....	.....	10n	.....	NW	0.05	1.3	Light snow..	M. Payne.
*Quebec, Quebec	.....	.....	29.69	754.1	15	— 9.4	82	W	2	0.9	.....	.....	10n	.....	W	0	0	Cloudy.....	Capt. Ashe, R. N.
*Rockliffe, Ontario	.....	.....	29.78	756.4	8	—13.3	80	NW	25	11.2	.....	8cs	5s	NW	NW	0	0	Fair.....	
St. John, N. B	.....	.....	29.88	758.9	10	—12.2	79	Calm	0	0	.....	.....	10n	.....	.....	0.180	4.57	Snowing.....	G. Murdoch, C. E.
*Saugeen, Ontario	.....	.....	29.97	761.2	14	—10.0	46	SW	23	10.3	.....	.....	10n	.....	.....	0	0	Cloudy.....	K. Stewart.
Stayner, Ontario	.....	.....	29.95	760.7	12	—11.1	68	NW	23	10.3	.....	0	5n	.....	NW	Inap.	Inap.	Cloudy	R. J. Cole.
Stratford, Ontario	28.62	726.9	30.01	762.2	9.9	—12.3	81	NW	13	5.8	.....	0	0	.....	.....	0.15	3.8	Fine.....	C. J. MacGregor, M. A.
*Sydney, C. B	.....	.....	30.00	762.0	2	—16.7	100	Calm	0	0	.....	0	0	.....	.....	0.01	0.3	Clear.....	T. C. Hill.
*Toronto, Ontario	.....	.....	29.94	760.5	15	— 9.4	80	W	23	10.3	.....	2c	8ks	W	W	Inap.	Inap.	Cloudy.....	Magnetic Observatory.
Woodstock, Ontario	.....	.....	30.02	762.5	12.7	—10.7	100	W	24	10 7	.....	0	1s	.....	.....	0	0	Clear.....	J. Montgomery.
SUB-SERIES.																			
St. Johns, Newfoundland	.....	.....	30.08	764.0	15.0	— 9.4	82	SW	.....	.....	.....	0	10s	.....	.....	0.01	0.3	Fair	John Delany.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
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NOTE.—The originals for Brockville, Charlottetown, Port Dover, Port Stanley, Stayner, St. Johns, N. F. and those telegraphed, give the amount of cloudiness by the scale 0 to 4. The elevation of Granton is 1,015 feet, or 309.4 m.; Stratford, 1,182 feet, or 360.3 m.

UNITED STATES SERIES.

Furnished by the coöperation of Bvt. Brig. Gen. Albert J. Myer, Chief Signal Officer, U. S. Army.

STATIONS.	Barometer: Corrected for instrum'tal error and temperature. Inches.	Barometer: Corrected for instrum'tal error and temperature. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Upper. 0—10.	Clouds. Amount. Lower. 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather	Observer.
Albany, N. Y.	.....	.....	29.82	757.4	10	—12.2	79	Calm	0	0	.....	Haze	5s	.....	.....	0	0	Fair	.....
Alpena, Mich.	.....	.....	30.12	765.0	8	—13.3	78	NW	12	5.4	.....	0	8s	.....	NW	0.03	0.8	Fair	.....
Atlantic City, N. J.	.....	.....	30.01	762 2	27	— 2.8	88	SW	8	3.6	.....	.....	10s	.....	SW	0	0	Cloudy	.....
Augusta, Ga.	.....	.....	30.30	769.6	42	5.6	87	NW	6	2.7	.....	0	8s	.....	NW	0.13	3.3	Fair	.....
Baltimore, Md.	.....	.....	30.02	762.5	29	— 1.7	67	SW	8	3.6	.....	2ck	8s	SW	SW	0	0	Fair	.....
Barnegat, N. J.	.....	.....	30.00	762.0	21	— 6.1	100	SW	15	6.7	.....	0	Fog	.....	SW	0	0	Foggy	.....
Bismarck, Dakota	28.55	725.2	30.45	773.4	— 5	—20.6	63	Calm	0	0	.....	8k	0	SW	.....	0	0	Fair	.....
Boston, Mass.	.....	.....	29.86	758.4	16	— 8.9	83	SW	11	4.9	.....	4cs	Haze	W	.....	0	0	Fair	.....
Breckenridge, Minn.	.....	.....	30.63	778.0	—12	—24.4	50	SW	8	3.6	.....	0	0	.....	.....	Inap.	Inap.	Clear	.....
Buffalo, N. Y.	.....	.....	29.90	759.4	16	— 8.9	83	W	28	12.5	.....	.....	10s	.....	W	0.01	0.3	Cloudy	.....
Burlington, Vt.	.....	.....	29.78	756.4	17	— 8.3	83	S	8	3.6	.....	.....	10s	.....	.....	0	0	Cloudy	.....
Cairo, Ill.	.....	.....	30.54	775.7	27	— 2.8	77	NW	16	7.2	.....	0	0	.....	.....	0	0	Clear	.....
Cape Hatteras, N. C.	.....	.....	30.08	764.0	36	2.2	80	NW	12	5.4	.....	.....	10s	.....	N	0.55	14.0	Cloudy	.....
Cape Henry, Va.	.....	.....	30.11	764.8	33	0.6	80	W	8	3.6	.....	2k	0	SW	.....	0.01	0.3	Fair	.....
Cape Lookout, N. C.	.....	.....	30.18	766.6	34	1.1	90	NW	21	9.4	.....	0	8s	.....	NW	0.45	11.4	Fair	.....
Cape May, N. J.	.....	.....	30.02	762.5	30	— 1.1	79	W	16	7.2	.....	5k	0	W	.....	0	0	Fair	.....
Charleston, S. C.	.....	.....	30.29	769.4	40	4.4	82	NW	6	2.7	.....	.....	10s	.....	N	0.09	2.3	Cloudy	.....
Cheyenne, Wyoming	24.23	615.4	30.17	766.3	15	— 9.4	67	SW	8	3.6	.....	0	0	.....	.....	0	0	Clear	.....
Chicago, Ill.	.....	.....	30.40	772.1	12	—11.1	80	SW	10	4.5	.....	0	0	.....	.....	0	0	Clear	.....
Cincinnati, Ohio.	.....	.....	30.28	769.1	24	— 4.4	74	NW	16	7.2	.....	.....	10s	.....	NW	0	0	Threatening	.....
Cleveland, Ohio.	.....	.....	30.12	765.0	19	— 7.2	77	W	28	12.5	.....	.....	10s	.....	W	0.06	1.5	Cloudy	.....
Corsicana, Tex.	.....	.....	30.68	779.3	28	— 2.2	77	NW	4	1.8	.....	0	0	.....	.....	0	0	Clear	.....
Davenport, Iowa.	.....	.....	30.55	776.0	10	—12.2	79	W	8	3.6	.....	Haze	0	.....	.....	0	0	Clear	.....
Denison, Tex.	.....	.....	30.72	780.3	26	— 3.3	76	NW	9	4.0	.....	0	0	.....	.....	0	0	Clear	.....
Denver, Col.	25.07	636.8	30.29	769.4	0	—17.8	85	S	4	1.8	.....	0	0	.....	.....	0	0	Clear	.....
Detroit, Mich.	.....	.....	30.12	765.0	16	— 8.9	66	W	9	4.0	.....	5k	0	W	.....	0	0	Fair	.....
Dodge City, Kan.	27.94	709.7	30.57	776.5	5	—15.0	87	NW	4	1.8	.....	0	2s	.....	.....	0	0	Clear	.....
Dubuque, Iowa.	.....	.....	30.50	774.7	11	—11.7	79	NW	1	0.4	.....	0	0	.....	.....	0	0	Clear	.....
Duluth, Minn.	.....	.....	30.49	774.4	0	—17.8	69	W	4	1.8	.....	0	0	.....	.....	0.02	0.5	Clear	.....
Eastport, Me.	.....	.....	29.83	757.7	22	— 5.6	72	Calm	0	0	.....	5k	8s	SW	SW	0	0	Cloudy	.....
Erie, Pa.	.....	.....	30.08	762.7	17	— 8.3	92	W	24	10.7	.....	.....	10n	.....	.....	Inap.	Inap.	Light snow	.....
Escanaba, Mich.	.....	.....	30.28	769.1	1	—17.2	72	NW	10	4.5	.....	0	0	.....	.....	0	0	Clear	.....
Fort Gibson, Indian Ter.	.....	.....	30.67	779.0	22	— 5.6	72	NW	2	0.9	.....	0	0	.....	.....	0	0	Clear	.....
Ft. St. Michael, Alaska.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Fort Sill, Indian Ter.	29.38	746.2	30.69	777.7	22	— 5.6	48	N	13	5.8	.....	0	0	.....	.....	0	0	Clear	.....
Fort Sully, Dakota.	28.81	731.8	30.70	779.8	6	—14.4	76	SE	2	0.9	.....	0	0	.....	.....	0	0	Clear	.....
Florence, Arizona.	28.61	726.7	30.16	766.1	49	9.4	.....	NE	.....	.....	.....	5k	0	NE	.....	0	0	Fair	.....
Galveston, Tex.	.....	.....	30.61	777.5	41	5.0	65	N	20	8.9	.....	0	0	.....	.....	0	0	Clear	.....
Grand Haven, Mich.	.....	.....	30.24	768.1	17	— 8.3	75	NW	22	9.8	.....	.....	10s	.....	NW	0.10	3.8	Cloudy	.....
Indianapolis, Ind.	.....	.....	30.39	771.9	20	— 6.7	70	NW	13	5.8	.....	.....	10n	.....	NW	Inap.	Inap.	Light snow	.....
Indianola, Tex.	.....	.....	30.64	778.2	40	4.4	56	N	24	10.7	.....	0	2s	.....	.....	0	0	Fair	.....
Jacksonville, Fla.	.....	.....	30.31	769.9	47	8.3	85	NW	5	3.6	.....	.....	10s	.....	.....	0.70	17.8	Cloudy	.....
Keokuk, Iowa.	.....	.....	30.55	776.0	10	—12.2	79	W	4	1.8	.....	0	0	.....	.....	0	0	Clear	.....
Key West, Fla.	.....	.....	30.20	767.1	74	23.3	90	E	8	3.6	.....	0	8ks	.....	.....	0	0	Cloudy	.....
Kittyhawk, N. C.	.....	.....	30.16	766.1	31	— 0.6	89	W	11	4.9	.....	.....	10s	.....	.....	0.54	13.7	Cloudy	.....
Knoxville, Tenn.	.....	.....	30.41	772.4	26	— 3.3	76	S	8	3.6	.....	0	0	.....	.....	0.03	0.8	Clear	.....
La Crosse, Wis.	.....	.....	30.49	774.4	8	—13.3	55	NW	12	5.4	.....	0	0	.....	.....	0.02	0.5	Clear	.....
Leavenworth, Kan.	.....	.....	30.79	780.3	13	—10.6	80	NW	4	1.8	.....	0	0	.....	.....	0	0	Clear	.....
Louisville, Ky.	.....	.....	30.38	771.6	25	— 3.9	62	W	22	9.8	.....	5k	0	NW	.....	0	0	Fair	.....
Lynchburg, Va.	.....	.....	30.11	764.8	30	— 1.1	54	W	6	2.7	.....	0	0	.....	.....	0.01	0.3	Clear	.....
Malone, N. Y.	.....	.....	29.69	754.1	17	— 8.3	84	SW	12	5.4	.....	.....	10s	.....	SW	0	0	Cloudy	.....
Marquette, Mich.	.....	.....	30.24	768.1	2	—16.7	72	W	12	5.4	.....	0	0	.....	.....	0	0	Clear	.....
Memphis, Tenn.	.....	.....	30.57	776.5	31	— 0.6	69	NW	10	4.5	.....	0	0	.....	.....	0	0	Clear	.....
Milwaukee, Wis.	.....	.....	30.38	771.6	10	—12.2	79	NW	20	8.9	.....	0	0	.....	.....	0.02	0.5	Clear	.....
Mobile, Ala.	.....	.....	30.50	774.7	35	1.7	70	N	9	4.0	.....	0	0	.....	.....	0.15	3.8	Clear	.....
Montgomery, Ala.	.....	.....	30.51	774.9	34	1.1	70	NW	5	2.2	.....	0	0	.....	.....	0.03	0.8	Clear	.....
Morgantown, W. Va.	29.01	736.8	30.13	765.3	25	— 3.9	75	W	16	7.2	.....	.....	10s	.....	W	Inap.	Inap.	Threatening	.....
Mt. Washington, N. H.	23.13	587.5	29.49	749.0	— 5	—20.6	100	NW	60	26.8	.....	.....	Fog	.....	.....	0	0	Foggy	.....
Nashville, Tenn.	.....	.....	30.44	773.2	29	— 1.7	67	W	7	3.1	.....	0	Haze	.....	.....	0	0	Clear	.....
New Haven, Conn.	.....	.....	29.91	759.7	20	— 6.7	55	Calm	0	0	.....	5ck	5s	NW	SW	0	0	Cloudy	.....
New London, Conn.	.....	.....	29.92	760.0	18	— 7.8	68	W	6	2.7	.....	0	0	.....	.....	0	0	Clear	.....
New Orleans, La.	.....	.....	30.51	774.9	41	5.0	61	N	12	5.4	.....	0	0	.....	.....	0.09	2.3	Clear	.....
Newport, R. I.	.....	.....	29.91	759.7	22	— 5.6	72	SW	12	5.4	.....	0	1s	.....	SW	0	0	Clear	.....
New York, N. Y.	.....	.....	29.97	761.2	16	— 8.9	66	W	8	3.6	.....	8k	Sm'c	W	.....	0	0	Fair	.....
Norfolk, Va.	.....	.....	30.18	765.3	35.5	1.9	85	SW	7	3.1	.....	0	0	.....	.....	0.05	0.8	Clear	.....
North Platte, Neb.	27.38	695.4	30.26	768.6	6	— 14.4	88	W	2	0.9	.....	0	0	.....	.....	0	0	Clear	.....
Omaha, Neb.	29.46	748.3	30.68	779.3	10	—12.2	68	NW	6	2.7	.....	0	0	.....	.....	0	0	Clear	.....
Oswego, N. Y.	.....	.....	29.83	757.7	23	— 5.0	72	SW	17	7.6	.....	.....	10n	.....	.....	Inap.	Inap.	Heavy snow	.....
Pembina, Dakota.	.....	.....	30.46	773.7	—15	—26.1	71	W	5	2.2	.....	0	0	.....	.....	0	0	Clear	.....
Philadelphia, Pa.	.....	.....	30.01	762.2	16	— 8.6	91	W	11	4.9	.....	.....	Fog	.....	.....	0	0	Foggy	.....
Pike's Peak, Col.	17.83	452.9	30.04	763.0	7	—13.9	54	SW	26	11.6	.....	2cs	5s	.....	.....	0	0	Fair	.....
Pittsburgh, Pa.	.....	.....	30.07	763.8	22	— 5.6	86	W	16	7.2	.....	.....	10s	.....	W	0	0	Cloudy	.....
Port Huron, Mich.	.....	.....	30.00	764.3	14	—10.0	63	W	8	3.6	.....	5cs	0	N	.....	0	0	Fair	.....
Portland, Me.	.....	.....	29.81	757.2	15	— 9.4	82	SW	8	3.6	.....	Haze	Haz	.....	.....	0	0	Hazy	.....
Portland, Oregon.	.....	.....	30.28	769.1	32	0.0	68	SE	12	5.4	.....	0	0	.....	.....	0	0	Clear	.....
Punta Rassa, Fla.	.....	.....	30.21	767.3	70.5	21.4	84	NW	16	7.2	.....	.....	8ks	.....	NW	Inap.	Inap.	Fair	.....
Rochester, N. Y.	.....	.....	29.85	758.2	16	— 8.9	83	W	21	9.4	.....	.....	10n	.....	.....	Inap.	Inap.	Light snow	.....
Salt Lake City, Utah.	26.02	660.9	30.34	770.6	6	—14.4	76	E	2	0.9	.....	0	0	.....	.....	0	0	Clear	.....
Sandy Hook, N. J.	.....	.....	29.94	760.5	19	— 7.2	69	W	10	4.5	.....	5ck	Haz	SW	.....	0	0	Fair	.....
San Diego, Cal.	.....	.....	30.23	767.8	58	14.4	87	N	2	0.9	.....	.....	10n	.....	N	Inap.	Inap.	Light rain	.....
San Francisco, Cal.	.....	.....	30.22	767.6	50	10.0	78	N	1	0.4	.....	0	0	.....	.....	0	0	Clear	.....
Santa Fé, N. M.	23.55	598.2	30.09	764.3	29	— 1.7	67	NE	10	4.5	.....	.....	10s	.....	.....	Inap.	Inap.	Threatening	.....
Savannah, Ga.	.....	.....	30.31	769.9	46	7.8	85	NW	6	2.7	.....	.....	10ks	.....	N	0.07	1.8	Clearing	.....
Shreveport, La.	.....	.....	30.67	779.0	32	0.0	79	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	.....
Smithville, N. C.	.....	.....	30.24	768.1	34	1.1	90	NW	4	1.8	.....	0	5ks	.....	N	0.28	7.1	Fair	.....
Springfield, Mass.	.....	.....	29.89	759.2	5	—15.0	60	Calm	0	0	.....	.....	8s	.....	NW	0	0	Cloudy	.....
St. Louis, Mo.	.....	.....	30.59	777.0	20	— 6.7	70	W	12	5.4	.....	0	0	.....	.....	0	0	Clear	.....
St. Marks, Fla.	.....	.....	30.36	771.1	47	8.3	85	N	12	5.4	.....	.....	10s	.....	N	0.11	2.8	Cloudy	.....
St. Paul, Minn.	.....	.....	30.53	775.4	— 1	—18.5	68	NW	8	3.6	.....	0	0	.....	.....	Inap.	Inap.	Clear	.....
St. Paul's Island, Alaska.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Thatcher's Island, Mass.	.....	.....	29.85	758.2	22	— 5.6	44	SW	16	7.2	.....	0	2s	.....	W	0	0	Fair	.....
Toledo, Ohio.	.....	.....	30.19	766.8	22	— 5.6	86	W	10	4.5	.....	.....	10n	.....	W	0.02	0.5	Light snow	.....
Tucson, Arizona.	27.74	704.6	30.29	769.4	34	1.1	.....	S	.....	.....	.....	5k	0	S	.....	0	0	Fair	.....
Tybee Island, Ga.	.....	.....	30.28	769.1	44	6.7	92	NW	12	5.4	.....	8s	0	W	.....	0.25	6.6	Fair	.....
Vicksburg, Miss.	.....	.....	30.63	778.0	30.5	— 0.8	94	Calm	0	0	.....	0	Sm'c	.....	N	0	0	Clear	.....
Virginia City, M. T.	24.46	621.3	29.94	760.5	4.6	—15.8	62	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	.....
Washington, D. C.	.....	.....	30.04	763.0	27	— 2.8	83	SW	4	1.8	.....	0	8s, fg	.....	SW	0	0	Fair	.....
Wilmington, N. C.	.....	.....	30.22	767.6	33	0.6	89	NW	10	4.5	.....	.....	10cs	.....	NW	0.30	7.6	Clearing	.....

UNITED STATES SERIES.—CONTINUED.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. U'p'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Wood's Holl, Mass	.....	.....	29.92	760.0	24	— 4.4	61	NW	9	4.0	.....	0	2s	.....	NW	0	0	Fair	
Yankton, Dakota	29.29	744.0	30.78	781.8	0	—17.8	69	SW	1	0.4	.....	0	0	.....	.....	0	0	Clear	
Yuma, Arizona	.....	.....	30.17	766.3	52	11.1	.....	NW	.....	.....	.....	0	10s	.....	.....	0	0	Cloudy	
Sub-Series.																			
Kingston, Jamaica, W. I.	.....	.....	30.28	769.1	76	24.4	72	N	7	3.1	.....	2c	0	.....	.....	0	0	.....	James Gall.
Navassa, W. I.	.....	.....	.....	.....	78	25.6	.....	NE	.....	.....	2	.....	.....	.....	.....	0	0	Clear	F. M. Everett.
Clifton, Ja., W. I.	27.28	692.9	30.08	764.0	65	18.3	73	Calm	0	0	.....	0	0	.....	.....	0	0	Fine, clear	C. Partridge.
Paramaribo, D. Guiana, S.A	.....	.....	30.07	763.8	79	26.1	87	E	.....	.....	2	3c	5k	E	.....	0	0	Fair	C. J. Hering.
Batavia, Dutch Guiana, S.A.	30.07	763.8	.....	.....	78.4	25.8	.....	N	.....	.....	.....	.....	.....	.....	.....	0.02	0.50	Showery	Dr. H. Groot.
Medellin, Colombia, S. A.	25.26	641.6	.....	.....	63.5	17.5	81	Calm	.....	.....	0	1cs	1s	.....	.....	0.05	1.3	Fair	Thomas Herran.
York Factory, B. A.	.....	.....	29.90	759.4	—14.5	—25.8	72	S	5	2.2	.....	0	0	.....	.....	0	0	Clear	J. Fortescue, W. Wood.
Honolulu, Oahu, H. I.	.....	.....	30.08	764.0	66	18.9	94	ESE	.....	.....	2	.....	.....	.....	.....	0	0	Clear	Daniel Smith.
Makawao, Maui, H. I.	.....	.....	30.05	763.3	65	18.3	83	Calm	.....	.....	0	0	0	.....	.....	0	0	.....	F. L. Clarke.

NOTE.—The originals give the amount of cloudiness by the scale 0 to 4, except York Factory, Makawao, Medellin and Paramaribo. The elevation of the barometer at Bismarck is 1,677 feet, or 511.1 meters; Cheyenne, 6,057.3 ft., or 1,846.2 m.; Clifton, about 2,892 ft., or 881.5 m.; Denver, 5,135 ft., or 1,565.2 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Florence, 1,550 (?) ft., or 472.5 (?) m.; Makawao, 2,205 ft., or 672.1 m.; Morgantown, 1,027.9 ft., or 313.3 m.; Medellin, 4,876 ft., or 1,486.2 m.; Mt. Washington, 6,285 ft., or 1,915.6 m.; North Platte, 2,846 ft., or 867.4 m.; Omaha, 1,054.6 ft., or 321.4 m.; Pike's Peak, 14,150.7 ft., or 4,313.1 m.; Salt Lake City, 4,362.2 ft., or 1,329.6 m.; Santa Fé, 6,862.2 (?) ft., or 2,091.6 (?) m.; Tucson, 2,513 (?) ft., or 772.1 (?) m.; Virginia City, 5,480 (?) ft., or 1,670.3 (?) m.; Yankton, 1,278 ft., or 389.5 m. The following constants are added in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Denver, 5.22 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fé, 6.54 in.; Tucson, 2.59 in.; Virginia City, 5.48 in. The elevation of Batavia is about 6 feet; the barometric readings need the addition of 0.2 mm. or 0.01 in. for reduction to sea-level.

UNITED STATES NAVAL SERIES.

By authority of the **SECRETARY OF THE NAVY.**

Furnished by the coöperation of the Navy Department, through Commodore Daniel Ammen, U. S. N., Chief of Bureau of Navigation.

STATIONS AND VESSELS.	True course toward—	Hourly rate in knots.	*Barometer as reported.		Temperature of the Air.		Relative Humidity.	Wind.				Clouds.				Rain-fall or melted snow in the past 24 hours.		State of Ocean.	Direction of swell from—	Weather.	OBSERVER.
								Direction.	Velocity		Force.	Amount.		Direction.							
												Up'er	Low'r	Up'er	Low'r						
			Inches.	Millimeters.	Fahrenheit.	Centigrade.	Per cent.	From—	Miles per hour.	Meters per second.	0—10.	0—10.	0—10.	From—	From—	Inches.	Millimeters.				
Naval Academy, Annapolis, Md.			29.70	754.4	28	— 2.2	70	SW			2		3			0	0			Cloudy	
Naval Hospital, Annapolis, Md.			30.05	763.3	26	— 3.3	100	W			1		1		W	0	0				
Navy Yard, Mare Island, Cal.			30.30	769.6	48.2	9.0	98	ENE			2		2			0	0			Clear	
Navy Yard, Norfolk, Va.			30.16†	766.1†	30	— 1.1		NW			2		4cs							‡D. clouds.	
Navy Yard, Pensacola, Fla.			30.45	773.4	39	3.9	100	NNW			1		1			0	0			‡D. clouds.	
Navy Yard, Portsmouth, N.H.			29.87	758.7	7	—13.9		WNW			3				S&E					Pleasant	
Adams, Port Royal, S. C.			30.35	770.9	45	7.2	100	WNW			2		10		S	0.033	0.84			‡D. clouds	
Ajax, Port Royal, S. C.			30.26	768.6	47	8.3		N			2		0		W	Blank	Blank			Pleasant	
Canonicus, New Orleans, La.			30.18†	766.6†	42	5.6		NNE			4		0							Clear	
Catskill, Port Royal, S. C.			30.23†	767.8†	43	6.1		NNW			3		9		N	Blank	Blank	Rippling.		Clearing	
Colorado, New York, N. Y.			30.04	763.0	20	— 6.7		SW			2		9		NE	0	0			‡D. clouds	
Dictator, Norfolk, Va.			30.31	769.9	43	6.1	92	NNW			3		9		S&E	Blank	Blank			Overcast	
Essex, Norfolk, Va.			30.25	768.3	34	1.1	100	WSW			2		4		E					‡D. clouds	
Hartford, Hampton Roads, Va.			30.30	769.6	33	0.6		N			4		3		ENE	0	0			Pleasant.	
Huron, Port Royal, S. C.			30.35	770 9	47	8.3	86	WNW			2		9		ESE					‡D. clouds	
Lehigh, Port Royal, S. C.			31 20†	792.5†	48	6.1	100	NW			3		8		S					Pleasant	
Manhattan, Port Royal, S. C.			30.30†	769.6†	44	6.7		NW			3		9		SE			Smooth		‡D. clouds	
Michigan, Erie, Pa.			30.10	764.5	17	— 8.3	67	WSW			1		8		SW					Cloudy	
Monongahela, Baltimore, Md.			30.00	762.0	31	— 0.6		WSW			2–3		..cks		N&E					‡D. clouds	
New Hampshire, Port Royal, S. C.			30.46	773.7	45	7.2	100	N			2		2		SE	Blank	Blank	Smooth		‡D. clouds	
Ossipee, New Orleans, La.			30.56	776.2	39	3.9		NNE			5									Blue sky	
Plymouth, Pensacola, Fla.			30.45	773.4	42	5.6	74	NNE			6		0			0.2	5.1	Moderate.	N	Clear	
¶ Rio Bravo, Matamoras, Mex.			30.32	770.1	43	6.1	83	W			1		10							‡D. clouds	
Santee, Annapolis, Md.			29.64	752.8	29	— 1.7		SW			2		3							Cloudy	
St. Louis, League Island, Pa.			29.88	758.9	19	— 7.2		SW			5		10		NE	0	0			Foggy	
Tallapoosa, Washington, D. C.			29.94	760.5	28	— 2.2	88	SW			3		10							Dense fog	
Wabash, Boston, Mass.			29.92	760.0	17	— 8.3		WSW			1		6		ENE					‡D. clouds	
Wyoming, Washington, D.C.			30.80†	782.3	27	— 2.8		W			2		Fog							Overcast	

* It is not known that the barometer is corrected for temperature, instrumental error or elevation. † Aneroid Barometer. ‡ Detached clouds. ¶ Barometer corrected for instrumental error and reduced to sea-level.

UNITED STATES MARINE SERIES

REPORTED TO THE OFFICE OF THE CHIEF SIGNAL OFFICER OF THE ARMY.

NAMES OF VESSELS.	TRUE COURSE TOWARD—	HOURLY RATE IN KNOTS.	BAROMETER REDUCED TO SEA-LEVEL.		TEMPERATURE OF THE AIR.		RELATIVE HUMIDITY.	WIND.				CLOUDS.				STATE OF OCEAN.	DIRECTION OF SWELL FROM—	WEATHER.	OBSERVER.
								Direction.	Velocity.		Force.	Amount.		Direction.					
												Up'er	Low'r	Upper.	Lower.				
			Inches.	Millimeters.	Fahrenheit.	Centigrade.	Per cent.	From—	Miles per hour.	Meters per second.	0—10.	0—10.	0—10.	From—	From—				

PACIFIC MAIL S. S. CO. MARINE SERIES.

Furnished by the coöperation of ————, President; Williams, Blanchard & Co., Agents.

OCCIDENTAL AND ORIENTAL S. S. CO. MARINE SERIES.

Furnished by the coöperation of George H. Bradbury, President; T. H. Goodman, Agent.

S. S. Belgic																			Capt. John Metcalf.
S. S. Gaelic																			Capt. W. H. Kidley.
S. S. Oceanic																			Capt. H. Parsell.

NORTH GERMAN LLOYD OF BREMEN MARINE SERIES.

Furnished by the coöperation of A. Schumacher & Co., Agents.

Steamer Nürnberg, N. 41°, 24′, W. 62°, 0′	W by S		29.95	760.7	34.2	1.2		Var.			4		.ks		NE	Smooth		Snowing	Capt. A. Jaeger.

MARINE SERIES. (Miscellaneous.)

Furnished by the coöperation of Captain James Jorgensen.

Schooner Addie Fuller, at Brunswick, Ga			30.26	768.6	49	9.4	85	NW	12	5.4			10d		NW			Cloudy	Capt. James Jorgensen.

NOTE.—The schooner Addie Fuller gives the amount of cloudiness by the scale 0 to 4.

COLLATED AT THE OFFICE OF THE CHIEF SIGNAL OFFICER OF THE ARMY, WASHINGTON, D. C.

The records which appear in this Bulletin are copied from the regular exchanges of this office, made in each instance in compliance with an especial request and are published for the uses of the coöperating observers. The barometric readings in the first two columns are reduced to freezing and their respective standards; those in the second two also to mean sea-level. The "weather" is generally published as given.

When the distinction between the upper and lower strata of clouds is not reported, the *kinds* or *types*, viz: cirrus, cumulus, stratus, nimbus, scud, fracto, pallio, haze, fog and smoke, as indicated, respectively, by the letters c, k, s, n, d, f, p, hz., fg. and sm'e, are generally published with the amount in the lower-cloud column. The distinction between the upper and lower strata is carefully made in the United States Series and a portion of the Canadian Series, and the types are indicated by the above letters or their combinations in the proper column.

Albert J. Myer

Brig. Gen. (Bvt. Assg^d.,) Chief Signal Officer, U. S. A

BULLETIN

OF

INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON JANUARY 25, 1877.

7:35 A. M. WASHINGTON mean time.

6:7 A. M. MEXICO mean time.
7:7 A. M. SAN JOSE mean time.
0:6 P. M. LISBON mean time.
0:28 P. M. MADRID mean time.
0:43 P. M. GREENWICH mean time.
0:53 P. M. PARIS mean time.
1:1 P. M. BRUSSELS mean time.
1:4 P. M. UTRECHT mean time.
1:13 P. M. BERNE mean time.

10:2 P. M. TOKEI mean time.

1:26 P. M. CHRISTIANIA mean time.
1:33 P. M. COPENHAGEN mean time.
1:33 P. M. ROME mean time.
1:37 P. M. BERLIN mean time.
1:49 P. M. VIENNA mean time.
1:55 P. M. STOCKHOLM mean time.
2:18 P. M. ATHENS mean time.
2:39 P. M. CONSTANTINOPLE mean time.
2:44 P. M. ST. PETERSBURG mean time.

ALGERIAN SERIES.

Furnished by the coöperation of General d'Eudeville, Commandant Supérieur du Génie in Algeria.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Nemours			30.32	770.0	63.7	17.6	82	Calm			0		0			0	0	Clear	Charnot.
Algiers			30.24	768.2	47.5	8.6		SW			1		4			0	0	Fair	Peter.
La Calle			30.07	763.8	57.4	14.1	63	NNW			3		6			0	0	Fair	Fleury.
Tunis			30.00	762.0	55.4	13.0		NW			5		2			0.118	3.0	Clear	Jacques.
Sfax																			
Saida			30.29	769.4	59.5	15.3	13	NNE			1		1			0	0	Clear	Millot.
Tebessa			30.22	767.5	42.4	5.8		WNW			2		2			0	0	Clear	Bourgeois.
Geriville			30.21	767.4	50.7	10.4	16	NNW			3		0			0	0	Clear	Lemaillot.
Laghouat			30.21	767.2	58.1	14.5	18	E			1		0			0	0	Clear	Guyot.
Biskra			30.21	767.2	61.5	16.4	38	NW			1		4			0	0	Fair	Kuntz.

NOTE.—In the originals the distinction between the amount of upper and lower clouds is apparently not made. The weather is published as given. The rain-fall is measured at 7 a. m., local time.

AUSTRIAN SERIES.

Furnished by the cooperation of Professor Ferdinand Osnaghi, Director of the Imperial and Royal Central Meteorological Institute at Vienna.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Agram			30.12	765.1	36.9	2.7	79	SW			2		2			0	0		Prof. Ivan Stoxir.
Cracow, I. R. Observatory			30.21	767.2	21.9	— 5.6	98	W			1		0			0.059	1.5		Dr. Wierzbiski.
Eperies			30.13	765.4	27.7	— 2.4	73	Calm			0		8cs,8			0.008	0.20		Julius Mikolik.
Gratz	28.86	733 0	30.18	766.5	32.5	0.3	65	ENE			2		6			0	0		Andreas Rospini.
Hermannstadt	28.60	726.3	30.09	764.3	30.6	— 0.8	73	E			1		8			0.035	0.90		Prof. Reissenberger
Kremsmünster	28.74	729.9	30.17	766.2	25.5	— 3.6	91	WNW			2		10			0	0		Prof. C. Wagner.
Lemberg			30.21	767.2	20.8	— 6.2	98	SE			1		10			0.039	1.0		Dr. T. Stanecki.
Nyiregyhaza																			Habzsuda Daniel.
Pola			30.06	763.4	43.0	6.1	63	NW			1		10s			0	0		I.R.Hydrographic Office.
Szegedin			30.12	765.1	34 3	1.3	65	Calm			0		6			0	0		Karl Stancel.
Trieste			30.09	764.2	42.4	5.8	64	Calm			0		1			0	0	Almost clear	Prof. V. Farolfi.
Vienna			30.15	765.8	29.7	— 1.3	76	NW			1		10			0.079	2 0		I. R. Central Met. Obs'y.

NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 7 p. m., local time. The elevation of Gratz is 343.5 meters, or 1,126.9 feet: Hermannstadt, 407.8 meters, or 1,337.9 feet; Kremsmünster, 383.6 meters, or 1,258.5 feet.

BELGIAN SERIES.

Furnished by the coöperation of J. C. Houzeau, Director of the Royal Observatory at Brussels.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Arlon			30.11	764.8	32.5	0.3	98	NW			2		10			0.555	14.1		Royal Observatory.
Brussels			29.91	759.8	39.4	4.1	89	SSE			5		10			0.508	12.9	Sprinkling	
Furnes			29.82	757.4	36.9	2.4	95	S			3		10			0.189	4.8		
Maeseyck			29.99	761 7	39.7	4.3	89	S			3		10			0.496	12.6		

NOTE.—In the originals, the weather is occasionally given in general notes.

BRITISH SERIES

Furnished by the coöperation of Robert H. Scott, Esq., Director of the Meteorological Office, London, Alexander Buchan, Secretary of the Scottish Meteorological Society, Edinburgh, and the respective Observers.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Aberdeen			29.35	745.5	42.[illegible]	5.8		SW	15	6.7			1			0.55[illegible]	13.97	Blue sky	William Boswell.
Ardrossan			29.46	748.3	42	5.6		WSW			5		5					Showery	William McNeil.
Armagh, Observatory			29.59	751.6	39.8	4.3		WSW	18	8.0			7					Overcast	S. Call, for Dr. Robinson.
Birr Castle, (Parsonstown)			29.72	754.9	41.3	5.2		WSW			2-3		7					*D. clouds	J. Dreyer.
Bradford			29.55	750.6	44.9	7.2		W			1		9			0.13	3.3	Blue sky	J. McLandsborough.
Bridgetown, (Barbados)			30.08	764.0	78.5	25.8		NE			2		6					Overcast	Sergt. J. F. Halanen, A.
Cambridge, Observatory			29.60	751.8	49.0	9.4		SSW			2		10					Raining	H. Todd. [H.C.
Cardington			29.61	752.1	50.0	10.0		SW			4		10					Overcast	John McLaren.
Carlisle																			T. Bell, for J. Cartmell.
Chatham, School M. E.			29.80	756.9	44.2	6.8		SW			3							Drizzling	Maj. C. N. Martin, R.E.
Dartmoor	28.30	718.8	29.83	757.7	40.0	4.4		NW			6		10					Showery	R. E. Power.
Davos Platz, (Switzerland)	24.78	629.4			29.8	— 1 2	60	SE			1		10					Snowing	Francis Redford, M. A.
Donaghadee			29.54	750.3	42	5.6		NW			4		5					*D. clouds	J. Mac Gowan.
Dover			29.72	754.9	47	8.3		SW			4		7					Raining	J. Costello.
Eccles, (near Manchester)			29.57	751.1	43.9	6.6		WNW	3.8	1.7			10					Raining	Thomas Mackereth.
Falmouth, Observatory			29.79	756.7	47.9	8.8		NW			4		10					Overcast	The Staff.
Fort Napier, (Natal)	27.44	697.0	29.68	753.9	82.4	28.0		SE			3		1					*D. clouds	P'vt. G. Salmon, A. H. C
Free Town, (Sierra Leone)			29.90	759.4	86	30.0		N			0		0?					*D. clouds?	
Galway, Queen's College			29.66	753.4	40	4.4		W			8		10					Raining	Prof. A. H. Curtis.
Gibraltar, (Mediterranean)			30.28	769.1	63.7	17.6		NE			2		0					Blue sky	Corpl. C. Aitken, A.H.C.
Glasgow, Observatory			29.44	747.8	38.6	3.7		WSW			4		10					Rain & snow	Lewis Stuart.
Great Yarmouth			29.66	753.4	43	6.1		S			6		8					Raining	G. T. Watson.
Greenwich, Royal Obs'y			29.65	753.1	49.6	9.8		SSW			3		10					Raining	The Staff, for G. B. Airy.
Guernsey			29.78	756.4	51.5	10.8		SSW			6		10					Raining	Dr. S. E. Hoskins.
Helston			29.90	759.4	49	9.4		NW			6		8k			0.38	9.7	Fair	M. P. Moyle.
Holyhead			29.64	752.8	44	6.7		W			6		2					Blue sky	John Tilston.
Kew, Observatory			29.65	753.1	49.6	9.8		SW	19	8.5			10					Raining	The Staff.
Kingstown			29.64	752.8	44	6.7		W			5		4					*D. clouds	George Mitchell.
Leicester Museum			29.61	752.1	45.0	7.2		NW			2		10					Drizzling	Wm. J. Harrison, F.G.S.
Malta, (Mediterranean)			30.02	762.5	57.4	14.1		NW			3		6k					*D. clouds	Corp'l. P. Bravis, A.H.C.
Nairn			29.25	742.9	42	5.6		W			2		10					Overcast	W. D. Penny.
Nassau, (Bahamas)			30.18	766.6	67	19.4		N			4		2					*D. clouds	Surg. Maj. Henry.
Nottingham, Observatory			29.59	751.6	45.2	7.3		WNW			3		10n		WNW	0.12	3.10	Raining	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			29.62	752.3	43.4	6.3		NW			2		10					Raining	Rev. Stephen Whitty.
Oxford, Radcliff Obs'y			29.60	751.8	53	11.7		SSW			3		10					Drizzling	J. Lucas.
Plymouth			29.74	755.4	47.9	8.8		NW			3		10					Raining	John Merrifield.
Roche's Point			29.78	756.4	44	6.7		WNW			5		5			Blank	Blank	Cloudy	W. Kennedy.
Saint Ann's Head			29.73	755.1	47	8.3		WNW			6		6					*D. clouds	John C. Walker.
Saint Heller, (Jersey)			29.89	756.9	51.0	10.6		SW			6		10					Raining	A. P. Amy.
Sandwick Manse, (Orkneys)			29.16	740.7	41	5.0		SSW	25	11.2			6					Showery	Rev. C. Clouston, LL. D.
Scarborough																			F. Shaw.
Scutari Cemetery, (Turkey)			29.75	755.6	41.0	5.0		NE			2		10					Drizzling	Sergt. W. H. Lyne.
Sheffield			29.62	752.3	40.6	4.8		WNW			2		10			0.[illegible]8	2.18	Raining	W. F. Cooper.
Silloth Rectory			29.54	750.3	46.8	8.2	67	SW			3		0			0.16[illegible]	4.06	Blue sky	Rev. Francis Redford
Stonyhurst, Observatory			29.56	750.8	44.3	6.8		W			3		10					Raining	Rev. S. J. Perry.
Stornoway, Lewis C., (Hebr.)			29.16	740.7	40	4.4		WSW			8		10					Rain & hail	John Smith.
Stratfield Turgiss			29.08	753.9	50.8	10.4		SW			2		10					Raining	Rev. Charles H. Griffith.
Thurso			29.16	740.7	43	6.1		SW			6		5					*D. clouds	John Trotter.
Truro, Royal Institution			29.85	758.2	53	11.7		NW			6		10					Raining	W. Newcombe.
Valencia, Observatory			29.84	757.9	43.7	6.5		WNW	34	15.2			5					*D. clouds	The Staff.
SUB-SERIES.																			
Calf of Man, (Isle of Man)					40	4.4		W			7		4			0.30	7.6		Henry Mercer.
Cape Good Hope, Obs'y			29.96	761.0	83.5	28.6	24	SE	10	4.5		2	4						The Staff, for E. J. Stone.
Hobart Town, (Tasmania)			29.61	752.1	67.0	19.4	94	W			5		9k			0	0		Francis Abbott, F.R.A.S.
Leith, Restalrig Park			29.44	747.8	42.2	5.7		W			4					0.09	2.3	Fine	Andrew Gibb.
Mauritius, Observatory			29.91	759.7	77.0	25.0	79	NE	6.4	2.9			9		ESE			Raining	C. Meldrum.
Melbourne, Observatory			29.92	760.0	59.9	15.5	76	S	4	1.8			4			0	0	Fine	R. L. J. Ellery.
Monach L't-house, (Hebrides)			29.23	742.4	41	5.0		WNW			8	5	5	NW		0.3	7.6		J. Youngclause.
North Unst, (Shetland Is.)			29.09	738.9	39	3.9		S			9		10			Blank	Blank		Robert Burnet.

NOTE.—Generally, the originals do not give the relative humidity, rain-fall, or distinction between upper and lower clouds. The originals give the wind direction to 32 points and weather by the Beaufort notation. The originals give the barometer for Aberdeen, Cardington, Galway, Oxford, St. Heller, Sandwick, Scarborough, Stonyhurst, Leith, Monach and North Unst as read off and the amount of cloudiness for Stornoway by the scale 0 to 4. The wind-force is given by the scale 0 to 12 in the official series; 0 to 6 in the sub-series; except in lbs. per square foot for Greenwich and Hobart Town. The rain-fall is measured at Aberdeen at 10 a. m.; Bradford, 9 a. m.; Hobart Town, 7:30 a. m.; Nottingham, 6 p. m.; Mauritius, 9 a. m., local time. The elevation of Dartmoor is 1,400 feet, or 426.7 metres; Davos Platz, 5,105? feet, or 1,556.0? meters; Fort Napier, 2,2[illegible]0 feet, or 670.6 meters. *Detached clouds.

By authority of the MINISTER OF FOREIGN AFFAIRS.

COSTA RICA SERIES.

Furnished by the coöperation of Senor Federico Maison, Director of the Central Office of Statistics and Meteorology.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
San José																			

DANISH SERIES.

Furnished by the co peration of Captain N. Hoffmeyer, Director of the Royal Danish Meteorological Institute at Copenhagen.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Copenhagen			30.15	765.9	30.9	— 0.6	79	SE			6		10						
Fanöe			29.99	761.8	32.2	0.1	94	SSE			6		10						
Godthaab, (Greenland)			29.37	745.9	11.5	—11.4	100	SSE			2		10					Snowing	
Stykkisholm, (Iceland)			28.82	734.5	29.7	— 1.3	96	SW			4		8						
Thorshavn, (Faröe)			28.64	727.4	42.8	6.0	87	SE			7		10					Raining	
Vestervig			29.94	760.4	30.2	— 1.0	92	SE			6		10						

NOTE.—The originals give the wind-force by the scale 0 to 6; occasionally, weather by Vienna symbols; no distinction between the amount of upper and lower clouds.

FRENCH SERIES.

Furnished by the co-operation of His Excellency, U. J. Le Verrier, Director of the Paris Observatory, and the respective Observers.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'r 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather	Observer.
Alençon	.....	.....	29.97	761.3	42.[illegible]	6	95	SW	.....	.....	1	.....	10	.....	.....	0	0	Covered	Normal School.
Amiens	.....	.....	29.98	761.5	39.[illegible]	4.0	93	WSW	.....	.....	2	.....	5	.....	W	0.047	1.2	Cloudy.....	Normal School.
Avignon	.....	.....	30.10	764.6	54.5	12.5	50	N	.....	.....	3	.....	0	.....	.....	0	0	Very clear...	Normal School.
Bar-sur-Seine	.....	.....	30.07	763.8	41.2	5.1	96	SW	.....	.....	1	.....	10	.....	.....	0.012	0.3	Light rain....	C. Saillard.
Beaumette, (near Angers)	.....	.....	29.99	761.8	53.4	11.9	80	SW	22.4	10.0	.....	.....	.....	.....	SW	0.126	3.2	.....	Beaumette Observ'tory.
Beauvais	.....	.....	29.93	760.2	42.1	5.6	90	S	.....	.....	2	.....	10	.....	SSW	0.035	0.90	Covered	Normal School.
Besançon	.....	.....	30.15	765.9	40.5	4.7	92	SW	.....	.....	2	.....	8	.....	SW	0.059	1.5	Very cloudy	Normal School.
Bourg en Bresse	.....	.....	30.21	767.4	41.4	5.2	94	SW	.....	.....	1	.....	10n	.....	NE	0.020	0.5	Covered	Normal School.
Bourges	.....	.....	30.07	763.8	48.2	9	89	WSW	.....	.....	2	.....	10	.....	S	0.047	1.2	Covered	Normal School.
Brest	.....	.....	29.80	757.0	53.1	11.7	90	WSW	.....	.....	5	.....	10	.....	WSW	.....	.....	Raining.....	Naval Observatory.
Carcassonne	.....	.....	30.18	766.5	49.6	9.8	75	W	.....	.....	2	.....	5	.....	E	0	0	Cloudy.....	Normal School.
Caen	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Chartres	.....	.....	29.97	761.2	45.1	7.3	97	SSW	.....	.....	3	.....	10	.....	.....	0	0	Covered	Normal School.
Châlons-sur-Marne	.....	.....	30.05	763.3	37.8	3.2	100	S	.....	.....	3	.....	10n	.....	.....	0	0	Covered	Normal School.
Clermont	.....	.....	30.10	764.4	49.[illegible]	9.6	57	E	.....	.....	1	.....	8	.....	W	0	0	Very cloudy	Puy de Dome Obs'y.
Commercy	.....	.....	30.00	762.0	37.0	2.8	84	SW	.....	.....	4	.....	10	.....	.....	0	0	Covered	Normal School.
Commune de Gréasque*	.....	.....	30.08	764.0	50.9	10.5	50	NW	.....	.....	4	.....	2	.....	NW	0	0	.....	M. Kina.
Grenoble	.....	.....	30.35	771.0	41.7	5.4	83	ENE	.....	.....	1	.....	10n	.....	NE	0	0	Covered	Normal School.
La Roche-sur-Yon	.....	.....	30.10	764.6	53.2	11.8	86	S	.....	.....	2	.....	8	.....	N	0.039	1.0	Very cloudy	Normal School.
Le Mans	.....	.....	30.03	762.7	48.7	9.3	95	WSW	.....	.....	2	.....	8	.....	SW	0	0	Very cloudy	Normal School.
Lons-Le-Saulnier	.....	.....	30.01	762.3	43.7	6.5	91	S	.....	.....	1	.....	10	.....	.....	0.059	1.50	Covered	Normal School.
Lorient	.....	.....	29.95	760.8	54.3	12.4	79	WSW	.....	.....	4	.....	10	.....	.....	0.098	2.5	Light rain...	Naval Observatory.
Mâcon	.....	.....	30.26	768.5	37.8	3.2	97	N	.....	.....	1	.....	.....	.....	.....	0	0	Foggy	Normal School.
Metz	.....	.....	30.15	765.7	34.2	1.2	90	ESE	.....	.....	3	.....	10	.....	.....	0	0	Foggy	M. Schuster.
Mirecourt	.....	.....	30.22	767.5	36.0	2.2	96	SW	.....	.....	2	.....	10	.....	NE	0	0	Covered	Normal School.
Nismes	.....	.....	30.09	764.2	56.8	13.8	69	NE	.....	.....	1	.....	0	.....	.....	0	0	Clear	Normal School.
Orleans	.....	.....	30.01	762.3	45.0	7.2	93	S	.....	.....	1	.....	10	.....	.....	0	0	Covered.....	Normal School.
Paris, Observatory	.....	.....	29.97	761.2	39.7	4.3	98	SSE	.....	.....	2	.....	10	.....	.....	0.011	0.28	Drizzling.....	National Observatory.
Parthenny	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Privas	.....	.....	30.16	766.1	49.6	9.8	.....	NW	.....	.....	2	.....	2	.....	NW	0	0	Slightly cl'dy	Normal School.
Rochefort, Observatory	.....	.....	30.09	764.3	56.7	13.7	73	SSW	.....	.....	4	.....	0	.....	.....	0	0	Clear	Naval Observatory.
Rouen	.....	.....	29.89	759.2	45.3	7.4	89	E	.....	.....	2	.....	10	.....	.....	0.012	0.3	Covered	Normal School.
Saint Lo	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Tarbes	29.06	738.2	30.10	766.8	53.6	12	70	WSW	.....	.....	2	.....	2	.....	E	0	0	Slightly cl'dy	Normal School.
Villefranche	.....	.....	30.37	771.3	41.2	5.1	91	SE	.....	.....	1	.....	10	.....	.....	0	0	Covered	Normal School.
Sub-Series.																			
Fort de France, Martinique	.....	.....	29.92	760.0	79.5	26.4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	L'Abbé Marchési.
Marseilles	.....	.....	30.03	762.8	57.2	14.0	47	NW	.....	.....	4	.....	2	.....	.....	0	0	Partly cl'dy.	Marseilles Observatory.
Mont-Louis	24.99	634.7	30.30	769.7	42.8	6.0	41	SW	9.3	4.17	.....	.....	8	.....	WNW	0	0	.....	—. Falguère.
Montsouris, Paris	.....	.....	29.96	761.0	41.0	5.0	99	S	.....	.....	2	.....	10	.....	SSW	0.008	0.2	Drizzling.....	Montsouris Observatory
Perpignan	.....	.....	30.13	765.2	62.1	16.7	28	NW	18.6	8.33	.....	.....	7	.....	NW	0	0	.....	Dr. Fines.
Pic du Midi, (Summit,) H. P.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. Baylac.
Pic du Midi, (Plantade,) H. P.	22.64	575.0	.....	.....	33.8	1.0	.....	N	.....	.....	4	.....	6	.....	.....	0	0	Fair.....	General de Nansouty.
Saint Maur, (near Paris)	.....	.....	29.97	761.1	41.7	5.4	100	S	.....	.....	1	.....	10	.....	.....	0	0	Covered	E. Renou.
Toulouse	.....	.....	30.23	767.9	51.4	10.8	68	WSW	.....	.....	1	.....	5	.....	.....	0	0	Dense fog....	Toulouse Observatory.
Tours	.....	.....	30.00	762.1	48.9	9.4	92	SW	.....	.....	2	.....	10	.....	W	0.008	0.2	.....	C. Marquet.
Versailles, (near Paris)	.....	.....	29.95	760.6	42.8	6.0	94	SW	.....	.....	2	.....	10	.....	.....	0.034	0.87	Rain & fog...	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai)	.....	.....	30.51	775.0	32.0	0.0	74	NNW	18.6	8.33	.....	.....	10	.....	.....	0.161	4.1	Rain & snow	Marc Dechevrens, S. J.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—Generally, the originals give the wind-force by the scale 0 to 7; no distinction between upper and lower clouds, and, in the official series, the amount by the scale 0 to 4; the rain-fall as measured at 7, 8 or 9 a. m., local time; at Clermont, 9 a. m. of the following day; the weather in general terms as published. The elevation of Clermont is 388 meters, or 1,272.9 feet; Commune de Gréasque, 322 meters, or 1,056.4 feet; Tarbes, 308 meters, or 1,010 feet; Mont-Louis, 1,586.40 meters, or 5,204.8 feet; Pic du Midi, (Summit,) 2,877 meters, or 9,439.1 feet; Pic du Midi, Plantade,) 2,366 meters, or 7,762.6 feet. In correcting the Mont-Louis barometric observations for altitude, the constant 135. millimeters has been added. *Bouches-du-Rhône

GERMAN SERIES.

Furnished by the coöperation of Professor Dr. G. Neumayer, Director of the German Naval Observatory, Hamburg.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'r 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather	Observer.
Bamberg	.....	.....	30.13	765.3	33.1	0.6	89	NW	.....	.....	2	.....	10	.....	.....	0	0	.....	Prof. T. Hoh.
Berlin	.....	.....	30.18	766.6	34.7	1.5	77	SE	.....	.....	1	.....	3	.....	.....	0	0	.....	Prof. Arndt.
Breslau	.....	.....	30.19	766.9	27.0	— 2.8	83	ENE	.....	.....	1	.....	10	.....	.....	0	0	.....	Royal University Obs'y.
Carlsruhe	.....	.....	30.10	764.5	35.2	1.8	78	SW	.....	.....	3	.....	10	.....	.....	0	0	.....	A. Senz.
Cassel	.....	.....	30.09	764.2	35.1	1.7	81	S	.....	.....	3	.....	10	SSW	.....	0.039	1.0	Snowing.....	Dr. H. Möhl.
Crefeld	.....	.....	29.97	761.2	39.7	4.3	80	SE	.....	.....	4	.....	9	.....	.....	0	0	.....	Director Lose.
Emden	.....	.....	30.07	763.6	36.9	2.7	98	S	.....	.....	3	.....	10	.....	.....	0.268	6.8	.....	Prof. Prestel.
Frankfort on the Main	.....	.....	30.13	765.2	36.5	2.5	81	SSW	.....	.....	1	.....	10	.....	.....	0	0	.....	Physical Society.
Friedrichshafen	28.69	728.7	30.19	766.8	34.5	1.4	93	SW	.....	.....	3	.....	10	.....	.....	0.563	14.3	Rain & snow	M. Wilhelm.
Hamburg	.....	.....	30.09	764.3	31.3	— 0.4	92	SE	.....	.....	4	.....	10	.....	.....	Inap.	Inap.	Foggy	Captain F. Hegemann.
Kiel	.....	.....	30.05	763.2	31.3	— 0.4	93	S	.....	.....	4	.....	10	.....	.....	0	0	.....	Prof. G. Karsten.
Königsberg, (Prussia)	.....	.....	30.34	770.7	22.1	— 5.5	81	SE	.....	.....	2	.....	0	.....	.....	0	0	.....	Prof. E. Luther.
Koslin	.....	.....	30.27	768.8	29.7	— 1.3	.....	Calm	.....	.....	0	.....	10	.....	.....	0	0	.....	H. Müller.
Leipsic	.....	.....	30.13	765.4	32.0	0.0	83	SE	.....	.....	1	.....	9	SSE	.....	0	0	.....	Prof. Bruhns.
Memel	.....	.....	30.37	771.5	24.3	— 4.3	84	SE	.....	.....	1	.....	3cs	.....	.....	0	0	Smoke-haze.	Reinbrecht & Skalweit.
Münster	.....	.....	29.69	754.2	39.9	4.4	88	SE	.....	.....	1	.....	6	.....	.....	0	0	.....	Prof. E. Heis.
Neufahrwasser	.....	.....	30.32	770.2	24.4	— 4.2	61	SE	.....	.....	2	.....	2	.....	.....	0	0	.....	A Lothe.
Posen	.....	.....	30.21	767.3	28.6	— 1.9	84	S	.....	.....	5	.....	10	.....	.....	0.004	0.1	Snowing.....	Dr. Magener.
Strassburg, (in Alsace)	.....	.....	30.14	765.5	36.1	2.3	86	SW	.....	.....	2	.....	10	W	.....	0.004	0.1	.....	Dr. Schur.
Stuttgart	.....	.....	30.13	765.2	37.4	3.0	74	SW	.....	.....	1	.....	10	.....	.....	0.463	11.5	Rain & snow	Prof. Schoder.
Thorn	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Dr. Hasenbalg.
Treves, (Trier)	.....	.....	30.02	762.5	35.6	2.0	87	S	.....	.....	1	.....	10	.....	.....	0.374	9.5	Foggy.....	Prof. Flesch.
Weissenburg, (Bavaria)	28.55	725.1	30.13	765.4	31.1	— 0.5	98	W	.....	.....	1	.....	10	.....	.....	0.157	4.0	.....	Dr. von Bebber.
Wustrow, Naval School	.....	.....	30.23	767.8	29.7	— 1.3	80	SE	.....	.....	4	.....	10	.....	.....	0	0	.....	E. F. Schütz.
German Naval Series.																			
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—The elevation of Friedrichshafen is 413.4 meters, or 1,356.3 feet; Weissenburg, 431 meters, or 1,414.0 ft. In the originals the distinction between the amount of upper and lower clouds is not made. It is not always certain that the remarks in the weather column refer to the moment of observation.

GREEK SERIES.

Furnished by the coöperation of Professor Dr. J. F. Julius Schmidt, Director of the Royal Observatory at Athens.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Athens			29.81	757.2	39.7	4.3		NW										Light snow..	

Note.—The originals give the barometer corrected, but not reduced to sea-level; occasionally the kind of clouds; the weather as published. They omit the humidity, wind-force, amount of cloudiness and rain-fall.

ITALIAN SERIES.

Furnished by the cooperation of His Excellency the Minister of Agriculture, Industry and Commerce, and the respective Observers.

Udine			30.06	763.4	39.2	4.0	53	W	0.7	0.3			5			0	0		Prof. Giovanni Clodig
Stelvio	21.99	558.6			19.8	— 6.8		SE			1		10			0	0		Signora Ernesta Manfredi.
Valdobbia	22 02	559.3			23.7	— 4.6	72	W			6		6	NW		Blank	Blank		Ab. Dom. Mongini.
Padua			30.04	763.0	37.2	2.9	67	NNE	1.3	0.6			4	N		0	0		Prof. Dott. Lor nzoni.
Vicenza			30.05	763.2	38.1	3.4	63	N	0.7	0.3			5	W		0	0		Conte Alm. Da Schio.
Verona			30.06	763.5	40.3	4.6	77	E			1		5			0	0		Dott. B. Bertoncelli.
Bergamo	28.65	727.8	30.02	762.6	35.6	2.0	82	SE			2		7			0	0		Prof Trionfini Carlo.
Domodossola			30.02	762.5	39.6	4.2	67	S			2		4			0	0		Prof. Giuseppe Calza.
Milan			30.07	763.7	35.6	2.0	98	W			1		8			0.087	2.2		Ab. Gio. Capelli
Pavia			30.05	763.3	37.8	3.2	80	N			1		10			0	0		Prof. Gio. Cantoni.
Moncalieri			30.06	763.4	36.0	2.2	91	NNW	0.7	0.3			8			0	0		Prof. P. F. Denza.
Mondovi																			Prof. D. C. Bruno.
Porto Maurizio			30.03	762.7	50.4	10.2	63	ENE			4		4	SW		0	0		Prof. L. Vassallo.
Genoa			30.01	762.3	49.6	9.8	59	SE	4.3	1.9			10	SW		0	0		Prof. G. M. Garibaldi.
Piacenza			30.07	763.8	34.2	1.2	91	N	0.7	0.3			10			0	0	Foggy	Dott. G. Manzi.
Parma			30.09	764.2	33.6	0.9	85	W			2		10			0	0	Foggy	Prof. P. Pigorini.
Florence			30.07	763.6	39.6	4.2	78	NW			2		10			0	0		Cav. F. Meucci.
Leghorn			30.02	762.6	41.7	5.4	62	ENE	10.7	4.7			10			0	0		Prof. P. Monte.
Siena	28.80	731.6	30.06	763.4	37.8	3.2	52	ENE	0	0			10	NW		0	0		Prof. L. Toscani.
Urbino	28.48	723.4	30.11	764.9	36.7	2.6	68	S			2		10			0	0		Prof. P. Serpieri.
Pesaro			30.11	764.9	41.9	5.5	74	SW	0	0			10	W		0	0		Prof. Luigi Guidi.
Ancona			30.07	763.6	44.1	6.7	61	NNW			2		2	W		0	0		Prof. F. De— Bosis.
Grosseto			30.07	763.7	46.8	8.2	63	NE			2		8	NW		0	0		Avv. P. Ponticelli.
Rome			30.04	763.1	45.7	7.6	46	NNE	1.8	0.8			5			0	0		Prof's. P. Secchi & L. Respighi.
Naples, O. U			30.06	763.4	48.9	9.4	40	NW			2		6	NE		0	0		Prof. L. Palmieri.
Lecce			30.00	761.9	44.2	6.8	43	NNE	19.9	8.9			6	N		0	0		Prof. C. De—Giorgi.
Cosenza			30.07	763.7	46.4	8.0	72	NW	0.7	0.3			3			0	0		Prof. F. D. Conti.
Cagliari																			Prof. A. Pacinotti.
Noto, (Sicily)			29.98	761.4	53.6	12.0	43	N			6		8	SW		0.008	0.2	Light rain...	Prof. F. Cafiero.
Palermo			30.02	762.5	52.5	11.4	54	W	2.5	1.1			10			0.087	2.2	Raining	Prof. G. Cacciatore.
Caltanissetta	28.00	711.2	30.05	763.2	44.2	6.8	74	WNW			6		10	E		0.024	0.6	Light rain..	Prof. A. Pagani.
Siracusa			29.99	761.7	52.7	11.5	52	NE			4		10	NNE		0.016	0.4	Light rain...	Prof. V. Giuliano.
Sub-Series.																			
Naples, S. R.			30.08	763.9	46.4	8.0	47	NNE	1.8	0.8			8	NE		0	0		Prof. F. Brioschi.

Note.—The originals give the wind-force by the scale 0 to 4, or the velocity in kilometers per hour; generally, no distinction between upper and lower clouds occasionally the weather by the Vienna symbols. The elevation of Stelvio is 2,543.0 meters, or 8,342.9 feet; Valdobbia, 2,548.0 meters or 8,359.3 feet; Bergamo, 379.6 meters, or 1,245 3 feet; Mondovi, 556 meters, or 1,824.2 feet; Siena, 348.5 meters, or 1,143.3 feet; Urbino, 451 meters, or 1,479.7 feet; Caltanissetta, 570.3 meters, or 1,871.0 feet.

JAPANESE SERIES.

Furnished by the coöperation of the Imperial University of Tokei, Japan.

Tokei			30.22	767.6	32	0.0		N	4	1.8			10			0	0		Prof. P. V. Veeder.

Note.—The originals give the amount of cloudiness by the scale 0 to 4 without distinguishing between upper and lower clouds. The rain-fall is measured at 7 a. m., local time.

MEXICAN SERIES.

By authority of the Secretary of Public Works.

Furnished by the coöperation of Senor Mariano Barcena, Director of the Central Meteorological Observatory in the City of Mexico.

Mexico																			Mariano Barcena.
																			Vicente Reyes.
																			Miguel Perez.
																			(Engineers in charge.)

Note.—The elevation of Mexico is 2,290 meters, or 7,512.9 feet. The rain-fall is measured at 6 a. m., local time.

NETHERLANDS' SERIES.

Furnished by the cooperation of Professor Buys Ballot, Director of the Royal Meteorological Institute of the Netherlands at Utrecht.

Flushing			29.86	758.4	39.2	4.0		S			6					0.024	0.6		
Groningen			29.88	758.9	35.4	1.9		S			3					0.004	0.1		
Heider			29.84	758.0	35.6	2.0		S			4					0.669	17.0		
Utrecht			29.88	758.9	36.1	2.3	96	S			4		10			0.508	12.9	Dull	

Note.—The originals give the wind-pressure in kilograms per square meter; for Utrecht, they give the weather as published, from which the amount of cloudiness is taken by the scale 0 to 4, without distinguishing between upper and lower clouds. It is assumed that the barometer readings have been reduced to sea-level.

NORWEGIAN SERIES.

Furnished by the coöperation of Professor H. Mohn, Director of the Royal Norwegian Meteorological Institute at Christiania.

Bergen			29.72	754.8	39.2	4.0	58	S	27.3	12.2			10			0	0		
Brönö			29.84	757.8	36.0	2.2	61	S	6.7	3			2						
Christiania			30.09	764.2	30.2	— 1.0	88	SSE	3.4	1.5			10			0	0		
Tromsö			29.76	755.9	38.8	3.8	54	SSW	13.4	6			10			0.197	5.0		

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols. The cloudiness and weather at Bergen refer to 2h., p. m., local time, instead of 1h., 4 min.

PORTUGUESE SERIES.

Furnished by the coöperation of J. C. de Brito Capello, Director of the Meteorological Observatory of the Infante Don Luiz at Lisbon.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Angra, (Azores)	.....	.....	30.36	771.1	57.6	14.2	91	WNW	2.5	1.1	.....	.....	8	.....	.....	0	0	.....	Dr. J. A. Sampaio.
Campo Major	.....	.....	30.32	770.0	57.2	14.0	69	SE	3.7	1.67	.....	.....	6	.....	.....	0	0	.....	Dr. A. M. R. dos Santos.
Funchal, (Madeira)	.....	.....	30.26	768.6	71.4	21.9	18	ENE	12.0	5.37	.....	.....	0	.....	.....	0	0	.....	Capt. D. A. de Gusmão.
Lisbon	.....	.....	30.39	771.9	54.0	12.2	76	NNE	7.4	3.3	.....	.....	8	.....	.....	3	0	.....	The Observatory.
Ponta Delgada, (Azores)	.....	.....	30.39	771.9	62.2	16.8	66	SW	0.7	0.3	.....	.....	4	.....	.....	0	0	.....	

NOTE.—The originals give the wind-velocity in kilometers per hour; occasionally, the weather by the Vienna symbols; the amount of cloudiness without distinguishing between upper and lower clouds; the barometer corrected but not reduced to sea-level. The rain-fall at Lisbon is measured at noon, instead of 9 h. 6 m., p. m.

RUSSIAN SERIES.

Furnished by the coöperation of Professor H. Wild, Director of the Imperial Central Physical Observatory of Russia, at St. Petersburg.

Warsaw	.....	.....	30.28	769.1	21.0	— 6.1	87	ENE	7	3	.....	.....	3	.....	.....	.....	.....	.....	Astronomical Obs.
Wilna	.....	.....	30.41	772.3	23.9	— 4.5	72	SE	2	1	.....	.....	10	.....	.....	.....	.....	.....	Astronomical Obs.
Dorpat	.....	.....	30.46	773.7	27.3	— 2.6	86	S	2	1	.....	.....	10	.....	.....	.....	.....	.....	Physical Cabinet.
St. Petersburg	.....	.....	30.46	773.7	26.4	— 3.1	86	SSE	7	3	.....	.....	10	.....	.....	.....	.....	Light fog	Central Physical Obs.
Kuopio	.....	.....	30.35	770.8	21.2	— 6.0	.....	W	7	3	.....	.....	10	.....	.....	.....	.....	.....	Ch. Forsten.
Kieff	.....	.....	30.36	771.2	8.4	—13.1	100	NE	4	2	.....	.....	10	.....	.....	.....	.....	.....	Physical Cabinet.
Nikolaiev	.....	.....	30.22	767.6	12.0	—11.1	68	NE	22	10	.....	.....	0	.....	.....	.....	.....	.....	Kurdakof
Kertch	.....	.....	30.44	773.1	25.6	— 3.6	100	NNE	16	7	.....	.....	10	.....	.....	.....	.....	.....	Lagorio.
Moscow	.....	.....	30.43	773.0	22.6	— 5.2	90	NW	9	4	.....	.....	10	.....	.....	.....	.....	.....	Meteorological Obs.
Lugan	.....	.....	30.21	767.3	0.7	—17.4	78	ENE	2	1	.....	.....	0	.....	.....	.....	.....	.....	Meteorological Obs.
Archangel	.....	.....	30.31	769.9	9.7	—12.4	99	Calm	0	0	.....	.....	4	.....	.....	.....	.....	.....	Ogorodnikof.
Tiflis	28.60	726.5	30.06	763.4	42.3	5.7	72	E	4	2	.....	.....	10	.....	.....	.....	.....	.....	Physical Observatory.
Astrakhan	.....	.....	30.18	766.5	19.9	— 6.7	86	NE	4	2	.....	.....	10	.....	.....	.....	.....	.....	Sebastianof.
Kasan	.....	.....	30.19	766.9	8.2	—16.0	94	S	4	2	.....	.....	9	.....	.....	.....	.....	Light snow.	Physical Cabinet.
Orenburg	.....	.....	30.23	767.9	—17.9	—27.7	.....	SW	10	7	.....	.....	5	.....	.....	.....	.....	.....	Tschernischef.
Ekaterinburg	29.04	737.7	30.08	764.0	7.7	—13.5	72	SW	7	3	.....	.....	10	.....	.....	.....	.....	.....	Meteorogical Obs.
Nukuss	.....	.....	30.21	767.2	28.4	— 2.0	92	W	0	0	.....	.....	10	.....	.....	.....	.....	.....	
Kasaly	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Bobrof.
Tashkend	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Michelson.
Barnaul	.....	.....	30.47	773.8	— 6.1	—20.6	66	SW	9	4	.....	.....	8	.....	.....	.....	.....	.....	Meteorological Obs.
Yeniseisk	.....	.....	29.91	759.8	11 8	—11.2	78	S	13	6	.....	.....	10	.....	.....	.....	.....	Snowing	Marks.
Irkutsk	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Usolzef.
Peking, (China)	.....	.....	30.57	776.5	17.6	— 8.0	42	N	7	3	.....	.....	0	.....	.....	.....	.....	.....	Physical Observatory.
Nertchinsk	28.17	715.5	30.69	779.5	—38.6	—39.2	92	Calm	0	0	.....	.....	0	.....	.....	.....	.....	.....	Meteorological Obs.
Vladivostock	.....	.....	29.97	761.2	14.0	—10.0	94	NW	18	8	.....	.....	10	.....	.....	.....	.....	.....	
Nikolnievsk, on the Amoor	.....	.....	.....	.....	0.1	—17.7	.....	Calm	0	0	.....	.....	10	.....	.....	.....	.....	Lunar corona	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

NOTE.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols; they omit the rain-fall. The elevation of Tiflis is 409 meters, or 1,341.8 feet; Ekaterinburg, 306.4 ? m., or 1,005.2 ? ft.; Tashkend, 494.2 ? m., or 1,621.3 ? ft.; Irkutsk, 392 m., or 1,286 ft.; Nertchinsk, 592.0 ? m., or 1,942.2 ? ft.

SPANISH SERIES.

Furnished by the coöperation of Antonio Aguilar, Director of the Royal Observatory at Madrid, and of Don Cecilio Pujazon, Captain R. N. Director of the Naval Observatory at San Fernando.

Madrid	.....	.....	30.39	771.9	46.8	8.2	83	S	3.0	1.33	.....	1	0	S	.....	0	0	Almost clear	Royal Observatory.
San Fernando	.....	.....	30.34	770.7	60.3	15.7	71	N	2.9	1.3	.....	0	0	.....	.....	.....	.....	.....	Naval Observatory.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

NOTE.—The originals give the weather in general terms, as published; rain-fall for San Fernando from preceding to following midnight; wind-velocity for Madrid in kilometers per hour.

SWEDISH SERIES.

Furnished by the coöperation of Professor R. Rubenson, Director of the Royal Swedish Meteorological Institute, at Stockholm, and of Dr. H. H. Hildebrandsson, Chief of the Meteorological Division of the Upsala Observatory.

Haparanda	.....	.....	30.17	766.3	25.9	— 3.4	87	SSW	.....	.....	4	.....	10	.....	.....	0	0	.....	
Umea	.....	.....	30.19	766.8	25.2	— 3.8	95	SW	.....	.....	6	.....	10	.....	.....	0	0	.....	
Hernosand	.....	.....	30.20	767.1	20.8	— 6.2	95	S	.....	.....	4	.....	10	.....	.....	0	0	.....	
Stockholm	.....	.....	30.26	768.3	32.0	0.0	89	S	.....	.....	2	.....	10	.....	.....	0	0	.....	
Wisby	.....	.....	30.32	770.0	31.3	— 0.4	78	SSE	.....	.....	6	.....	10	.....	.....	0	0	.....	
SUB-SERIES.																			
Upsala	.....	.....	30.24	768.0	31.5	— 0.3	80	SSE	10.7	4.8	.....	.....	10	.....	S	0.000	0.01	.....	Dr. Hildebrandsson.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

NOTE.—The originals give the wind-force by the scale 0 to 6, and Upsala also velocity in meters per second; occasionally, the weather by the Vienna symbols, or in general terms; no distinction between the amount of upper and lower clouds. The rain-fall is measured at 8 a. m., local time.

SWISS SERIES.

Furnished by the coöperation of Professor R. Wolf, Director of the Observatory at Zurich, and of Professor E. Plantamour, Director of the Observatory at Geneva.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Geneva	28.71	729.2	30.18	766.6	39.6	4.2	72	WSW	.....	.....	1	.....	10	.....	.....	0	0	Misty	The Observatory.
Zurich	28.49	723.6	30.19	766.9	34.9	1.6	93	NE	.....	.....	1	.....	10	.....	.....	0.402	10.2	Rain & snow	The Observatory.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—For Geneva the corresponding departures from the normal values are: Barometer, +1.8 mm; Thermometer, +2.3 cent.; Relative Humidity, —5 per cent.

NOTE.—The rain-fall is measured at Zurich at 7 a. m. on the following day. The originals give the barometer corrected but not reduced to sea-level; the wind-force by the scale 0 to 4 for Zurich; the amount of cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The elevation of Geneva is 408 meters, or 1,339 feet, and that of Zurich 470 meters, or 1,542 feet.

TURKISH SERIES.

Furnished by the coöperation of A. Coumbary, Effendi, Director of the Central Observatory at Constantinople, and of Professor C. V. A. Van Dyck, Superintendent of the Lee Observatory at Beirut.

Constantinople	.....	.....	29.82	757.4	41.0	5.0	96	NNE	20	9.0	.....	.....	10	.....	NE	0.079	2.0	Raining	
Fao, (Persian Gulf)	.....	.....	30.21	767.4	61.3	16.3	.....	SE	.....	.....	3	.....	10	.....	.....	.....	.....	Raining	
Salonica	.....	.....	29.95	760.6	41.5	5.3	.....	N	.....	.....	1	.....	5	.....	.....	.....	.....	Snowing	
Valona	.....	.....	29.82	757.4	42.4	5.8	.....	NW	.....	.....	2	.....	0	.....	.....	.....	.....	.....	
Varna	.....	.....	29.90	759.5	24.8	— 4.0	.....	N	.....	.....	6	.....	10	.....	.....	.....	.....	Snowing	
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y	.....	.....	29.77	756.2	53.1	11.7	75	SW	.....	.....	5	.....	10n	.....	SW	.....	.....	Showery	Prof. C. V. A. Van Dyck

NOTE.—The originals give the wind-force by the scale 0 to 7, (except Beirut, by the scale 0 to 12, and Constantinople velocity in meters per second;) the weather in general terms as published; no distinction between upper and lower clouds, and, except Constantinople and Beirut, the amount by the scale 0 to 4. It is assumed that the barometer is reduced to sea-level.

CANADIAN SERIES.

Furnished by the coöperation of Professor G. T. Kingston, Director of the Magnetic Observatory at Toronto, and Superintendent of the Meteorological Office of the Dominion of Canada, and the respective Observers. Those marked with a star (*) are also telegraphed daily to the office of the Chief Signal Officer, U. S. Army.

Bathurst, N. B	.....	.....	29.60	751.8	— 6.5	—21.4	80	NW	12	5.4	.....	.....	0	.....	.....	.....	.....	.....	Hon. J. Ferguson.
Brockville, Ontario	.....	.....	30.28	769.1	— 8	—22.2	.....	Calm	0	0	.....	0	2s	.....	NW	0.10	2.5	Fair	W. R. Bigg.
*Chatham, N. B	.....	.....	29.55	750.6	— 4	—20.0	97	W	13	5.8	.....	0	0	.....	.....	0.06	1.5	Clear	G. A. Blair.
Charlottetown, P. E. Island	.....	.....	29.43	747.5	4	—15.6	95	W	23	10.3	.....	0	0	.....	.....	0.100	2.54	Clear	H. J. Cundall, C. E.
Cornwall, Ontario	.....	.....	30.24	768.1	— 7.7	—22.1	100	W	.....	.....	1	0	0	.....	.....	0.02	0.5	Bright	James Smith, M. A.
Dalhousie, N. B	.....	.....	29.71	754.6	.....	.....	.....	W	.....	.....	2	.....	.....	.....	.....	0.07	1.8	Clear	H. A. Johnson.
Esquimault, B. C	.....	.....	30.06	763.5	43.8	6.6	70	NE	.....	.....	.....	.....	10n	.....	.....	0.01	0.3	Cloudy	W. H. Bevis.
Fredericton, N. B	.....	.....	29.76	755.9	— 6.1	—21.2	69	NW	18	8.0	.....	1c	0	.....	.....	0	0	Clear	Prof. Harrison.
*Fort Garry, Manitoba	.....	.....	30.07	763.8	— 6	—21.1	96	W	5	2.2	.....	2c	2s	W	W	0	0	Fair	James Stewart.
Goderich, Ontario	.....	.....	30.33	770.4	12.0	—11.1	88	W	.....	.....	1	0	0	.....	.....	0	0	Fair	H. J. Strang, M. A.
Granton, Ontario	29.09	738.9	30.32	770.1	4.6	—15.2	.....	SW	.....	.....	1	1cs	0	.....	.....	0	0	Clear	James Grant.
*Halifax, N. S	.....	.....	29.54	750.3	7	—13.9	86	W	20	8.9	.....	0	0	.....	.....	0.160	4.06	Clear	F. Allison, M. A.
Hamilton, Ontario	.....	.....	30.16	766.1	12.4	—10.9	80	SW	.....	.....	3	8cs	0	.....	.....	0	0	Clear	G. Dickson.
Heart's Content, N. F	.....	.....	29.10	739.1	27	— 2.8	100	E	.....	.....	3	.....	10	.....	.....	0.09	2.3	Snowing	E. Weedon.
*Kingston, Ontario	.....	.....	30.29	769.4	0	—17.8	77	N	1	0.4	.....	10ck	0	NW	.....	Inap	Inap.	Fair	S. Woods, M. A.
*Montreal, Quebec	.....	.....	30.20	767.1	— 9	—22.8	74	W	18	8.0	.....	0	0	.....	.....	0.01	0.3	Clear	C. H. McLeod, C. E.
*Ottawa, Ontario	.....	.....	30.22	767.6	— 9	—22.8	87	SW	8	3.6	.....	0	0	.....	.....	0	0	Clear	J. B. Haney.
*Parry Sound, Ontario	.....	.....	30.23	767.8	1	—17.2	85	N	11	4.9	.....	5k	5ks	N	N	0.01	0.3	Cloudy	Rev. R. Mosley.
Port Dover, Ontario	.....	.....	30.33	770.4	7	—13.9	91	SW	5	2.2	.....	10k	0	SW	.....	0.02	0.5	Fair	H. Morgan.
Port Hastings, N. S	.....	.....	29.34	745.2	11.7	—11.3	.....	NW	10	4.5	.....	.....	.....	.....	.....	0	0	Blustering	Peter Grant.
Port Stanley, Ontario	.....	.....	30.34	770.6	8	—13.3	83	W	12	5.4	.....	.....	10ks	.....	W	0.10	2.5	Fair	M. Payne.
*Quebec, Quebec	.....	.....	30.09	764.3	—13	—25.0	75	W	8	3.6	.....	0	0	.....	.....	0.10	2.5	Clear	Capt. Ashe, R. N.
*Rockliffe, Ontario	.....	.....	30.26	768.6	—20	—28.9	72	NW	2	0.9	.....	5cs	0	NW	.....	0	0	Fair	
St. John, N. B	.....	.....	29.73	755.1	2	—16.7	67	NW	20	8.9	.....	0	0	.....	.....	0	0	Clear	G. Murdoch, C. E.
*Saugeen, Ontario	.....	.....	30.22	767.6	10	—12.2	58	Calm	0	0	.....	.....	10s	.....	.....	0.10	2.5	Light snow	K. Stewart.
Stayner, Ontario	.....	.....	30.27	768.8	6	—14.4	98	Calm	0	0	.....	.....	10n	.....	.....	0.15	3.8	Cloudy	R. J. Cole.
Stratford, Ontario	28 80	733.8	30.42	770.1	4.2	—15.4	87	W	7	3.1	.....	1cs	3s	W	.....	0.05	1.3	Fine	C. J. MacGregor, M. A.
*Sydney, C. B	.....	.....	29.17	740.9	17	— 8.3	98	W	22	9.8	.....	Hazc	5n	.....	W	0.12	3.0	Light snow	T. C. Hill.
*Toronto, Ontario	.....	.....	30.28	769.1	11	—11.7	78	W	8	3.6	.....	8cs	0	W	.....	Inap.	Inap.	Fair	Magnetic Observatory.
Woodstock, Ontario	.....	.....	30.32	770.1	4.5	—15.3	74	W	9	4.0	.....	5ck	3s	W	W	0	0	Cloudy	J. Montgomery.
Sub-Series.																			
St. Johns, Newfoundland	.....	.....	29.17	740.9	29.0	— 1.7	.....	Calm	.....	.....	.....	.....	10n	.....	.....	.....	.....	Snowing	John Delany.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—The originals for Brockville, Charlottetown, Port Dover, Port Stanley, Stayner, St. Johns, N. F. and those telegraphed, give the amount of cloudiness by the scale 0 to 4. The elevation of Granton is 1,015 feet, or 309.4 m.; Stratford, 1,182 feet, or 360.3 m.

UNITED STATES SERIES.

Furnished by the coöperation of Bvt. Brig. Gen. Albert J. Myer, Chief Signal Officer, U. S. Army.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain fall or melted snow in the past 24 hours. Inches.	Rain fall or melted snow in the past 24 hours. Millimeters.	Weather	Observer.
Albany, N. Y.	.....	.....	30.26	768.6	3	—16.1	73	NW	4	1.8	.....	0	5s	.....	.....	Inap.	Inap.	Fair	
Alpena, Mich.	.....	.....	30.28	769.1	4	—15.6	74	SW	6	2.7	.....	.....	10s	.....	SW	0	0	Cloudy	
Atlantic City, N. J.	.....	.....	30.34	770.6	17	— 8.3	67	W	10	4.5	.....	0	0	.....	.....	0	0	Clear	
Augusta, Ga.	.....	.....	30.51	774.9	30	— 1.1	78	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Baltimore, Md.	.....	.....	30.37	771.4	19	— 7.2	69	SW	4	1.8	.....	Haze	Sm'c	.....	.....	0	0	Smoky	
Barnegat, N. J.	.....	.....	30.30	769.6	14	—10.0	91	W	15	6.7	.....	0	2s	.....	.....	0	0	Clear	
Bismarck, Dakota	28.29	718.6	30.10	764.5	6	—14.4	76	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Boston, Mass.	.....	.....	30.12	765.0	5.1	—14.7	76	W	9	4.0	.....	0	18,hz.	.....	W	Inap.	Inap.	Clear	
Breckenridge, Minn.	.....	.....	30.11	764.8	— 3	—19.4	66	SW	8	3.6	.....	0	0	.....	.....	0	0	Clear	
Buffalo, N. Y.	.....	.....	30.27	768.8	12	—11.1	80	W	12	5.4	.....	0	5s	.....	W	Inap	Inap.	Fair	
Burlington, Vt.	.....	.....	30.23	767.8	— 4	—20.0	64	N	7	3.1	.....	0	2s	.....	.....	0.03	0.8	Fair	
Cairo, Ill.	.....	.....	30.51	774.9	24	— 4.4	74	S	3	1.3	.....	8k	0	W	.....	0	0	Fair	
Cape Hatteras, N. C.	.....	.....	30.39	771.9	32	0.0	99	N	9	4.0	.....	0	0	.....	.....	0	0	Clear	
Cape Henry, Va.	.....	.....	30.43	772.9	25	— 3.9	75	SW	9	4.0	.....	0	0	.....	.....	0	0	Clear	
Cape Lookout, N. C.	.....	.....	30.46	773.7	30	— 1.1	68	N	6	2.7	.....	0	0	.....	.....	0	0	Clear	
Cape May, N. J.	.....	.....	30.34	770.6	22	— 5.6	72	NW	28	12.5	.....	0	0	.....	.....	0	0	Clear	
Charleston, S. C.	.....	.....	30.47	773.9	35	— 1.7	35	N	8	3.6	.....	0	0	.....	.....	0	0	Clear	
Cheyenne, Wyoming	24.12	612.6	30.00	762.5	19	— 7.2	52	NW	20	8.9	.....	0	0	.....	.....	0	0	Clear	
Chicago, Ill.	.....	.....	30.42	772.7	7	—13.9	77	S	5	2.2	.....	2c	Sm'c	.....	.....	0	0	Fair	
Cincinnati, Ohio	.....	.....	30.46	773.7	21	— 6.1	71	SW	4	1.8	.....	2cs	0	W	.....	0	0	Clear	
Cleveland, Ohio	.....	.....	30.41	772.4	9	—12.8	79	SW	9	4.0	.....	.....	10s	.....	SW	Inap.	Inap.	Cloudy	
Corsicana, Tex.	.....	.....	30.43	772.9	39	3.9	63	Calm	0	0	.....	.....	10s	.....	.....	0	0	Cloudy	
Davenport, Iowa	.....	.....	30.43	772.9	— 1	—18.3	100	Calm	0	0	.....	4cs	Haz.	W	.....	0	0	Fair	
Denison, Tex.	.....	.....	30.45	773.4	36	2.2	61	S	2	0.9	.....	.....	10s	.....	.....	0	0	Cloudy	
Denver, Col.	24.02	633.0	30.14	765.5	18	— 7.8	68	S	8	3.6	.....	0	0	.....	.....	0	0	Clear	
Detroit, Mich.	.....	.....	30.34	770.6	8	—13.3	78	SW	5	2.2	.....	.....	10s	.....	.....	0	0	Cloudy	
Dodge City, Kan.	27.54	699.5	30.03	762.7	15	— 9.4	64	NW	14	6.3	.....	0	2s	.....	W	0	0	Clear	
Dubuque, Iowa.	.....	.....	30.39	771.9	— 7	—21.7	59	SW	1	0.4	.....	0	5s	.....	.....	0	0	Fair	
Duluth, Minn.	.....	.....	30.09	764.3	6	—14.4	76	Calm	0	0	.....	.....	10s	.....	.....	0	0	Cloudy	
Eastport, Me.	.....	.....	29.80	756.9	— 4	—20.0	48	NW	22	9.8	.....	5ck	0	W	.....	0.03	0.8	Fair	
Erie, Pa.	.....	.....	30.35	770.9	9	—12.8	78	SW	10	4.5	.....	2c	2s	NW	.....	Inap.	Inap.	Fair	
Escanaba, Mich.	.....	.....	30.21	767.3	7	—13.9	77	SW	5	2.2	.....	.....	10s	.....	.....	0	0	Cloudy	
Fort Gibson, Indian Ter.	.....	.....	30.35	770.9	36	2.2	45	Calm	0	0	.....	.....	10s	.....	W	0	0	Cloudy	
Ft. St. Michael, Alaska	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Fort Sill, Indian Ter.	29.05	737.9	30.21	767.3	39	3.9	37	SW	1	0.4	.....	5cs	0	W	.....	0	0	Fair	
Fort Sully, Dakota	28.43	722.1	30.26	768.6	9	—12.8	78	NW	5	2.2	.....	0	0	.....	.....	0	0	Clear	
Florence, Arizona	28.64	727.4	30.21	767.3	45	7.2	.....	NE	.....	.....	.....	0	0	.....	.....	Inap	Inap	Clear	
Galveston, Tex.	.....	.....	30.43	772.9	49	9.4	71	E	6	2.7	.....	8ck	0	W	.....	0	0	Cloudy	
Grand Haven, Mich.	.....	.....	30.30	769.6	22	— 5.6	79	W	15	6.7	.....	.....	10s	.....	NW	Inap.	Inap.	Cloudy	
Indianapolis, Ind.	.....	.....	30.49	774.4	16	— 8.9	66	Calm	0	0	.....	1c	Sm'c	W	.....	Inap	Inap.	Clear	
Indianola, Tex.	.....	.....	30.42	772.7	48	8.9	77	E	2	0.9	.....	.....	10s	.....	.....	0	0	Cloudy	
Jacksonville, Fla.	.....	.....	30.40	772.1	37	2.8	63	NW	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Keokuk, Iowa.	.....	.....	30.37	771.4	13	—10.6	81	S	3	1.3	.....	.....	10s	.....	S	0	0	Cloudy	
Key West, Fla.	.....	.....	30.28	769.1	65	18.3	90	NE	16	7.2	.....	0	0	.....	.....	0	0	Clear	
Kittyhawk, N. C.	.....	.....	30.46	773.7	25	— 3.9	75	NW	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Knoxville, Tenn.	.....	.....	30.46?	773.7?	20	— 6.7	55	NW	4	1.8	.....	8ck	0	W	.....	0	0	Cloudy	
La Crosse, Wis.	.....	.....	30.24	768.1	4	—15.6	61	S	16	7.2	.....	0	0	.....	.....	0	0	Clear	
Leavenworth, Kan.	.....	.....	30.29	769.4	20	— 6.7	70	SE	5	2.2	.....	0	2s	.....	.....	0	0	Clear	
Louisville, Ky.	.....	.....	30.51	774.9	29	— 0.7	85	SW	4	1.8	.....	5k	Sm'c	SW	.....	0	0	Fair	
Lynchburg, Va.	.....	.....	30.45	773.4	23	— 5.0	66	SW	2	0.9	.....	10ck	0	SW	.....	0	0	Cloudy	
Malone, N. Y.	.....	.....	30.20	767.1	— 4	—20.0	64	W	2	0.9	.....	0	0	.....	.....	0.20	5.1	Clear	
Marquette, Mich.	.....	.....	30.14	765.5	10	—12.2	79	W	12	5.4	.....	.....	10s	.....	.....	0	0	Cloudy	
Memphis, Tenn.	.....	.....	30.54	775.7	29	— 1.7	77	SE	4	1.8	.....	.....	8ks	.....	SW	0	0	Cloudy	
Milwaukee, Wis.	.....	.....	30.39	771.9	2	—16.7	72	SW	5	2.2	.....	5c	0	W	.....	0	0	Fair	
Mobile, Ala.	.....	.....	30.48	774.2	32	0.0	69	N	6	2.7	.....	5c	0	NW	.....	0	0	Fair	
Montgomery, Ala.	.....	.....	30.52	775.2	31	— 0.6	68	N	2	0.9	.....	0	0	.....	.....	0	0	Clear	
Morgantown, W. Va.	29.31	744.5	30.47	773.9	16	— 8.9	66	SW	4	1.8	.....	0	0	.....	.....	0.01	0.3	Clear	
Mt. Washington, N. H.	22.84	580.1	29.20	741.7	—35	—37.2	100	NW	120	53.6	.....	.....	Fog	.....	.....	0	0	Foggy	
Nashville, Tenn.	.....	.....	30.54	775.7	23	— 5.0	73	Calm	0	0	.....	2ck	8s	W	.....	0	0	Cloudy	
New Haven, Conn.	.....	.....	30.23	767.8	16	— 8.9	55	NW	3	1.3	.....	Haze	0	.....	.....	Inap.	Inap.	Clear	
New London, Conn.	.....	.....	30.22	767.6	12	—11.1	61	NW	9	4.0	.....	0	0	.....	.....	0	0	Clear	
New Orleans, La.	.....	.....	30.45	773.4	40	4.4	56	NE	8	3.6	.....	9k	0	W	.....	0	0	Cloudy	
Newport, R. I.	.....	.....	30.16	766.1	13	—10.6	61	W	24	10.7	.....	0	0	.....	.....	0	0	Clear	
New York, N. Y.	.....	.....	30.27	768.8	15	— 9.4	65	W	11	4.9	.....	0	0	.....	.....	Inap.	Inap.	Clear	
Norfolk, Va.	.....	.....	30.44	773.2	28	— 2.2	67	SW	6	2.7	.....	0	Haze	.....	.....	0	0	Clear	
North Platte, Neb.	27.22	691.4	30.04	763.0	8	—13.3	89	W	14	6.3	.....	0	0	.....	.....	0	0	Clear	
Omaha, Neb.	29.05	737.9	30.23	767.8	14	—10.0	72	S	3	1.3	.....	0	0	.....	.....	0	0	Clear	
Oswego, N. Y.	.....	.....	30.26	768.6	10.5	—11.9	85	NW	14	6.3	.....	.....	10s	.....	W	Inap.	Inap.	Cloudy	
Pembina, Dakota	.....	.....	30.04	763.0	— 7	—21.7	80	W	11	4.9	.....	0	0	.....	.....	0	0	Clear	
Philadelphia, Pa.	.....	.....	30.33	770.4	16	— 8.9	58	NW	11	4.9	.....	2cs	0	NW	.....	Inap.	Inap.	Fair	
Pike's Peak, Col.	17.75	450.8	29.96	761.0	7	—13.9	54	NE	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Pittsburgh, Pa.	.....	.....	30.42	772.7	13	—10.6	81	W	8	3.6	.....	0	0	.....	.....	Inap.	Inap.	Clear	
Port Huron, Mich.	.....	.....	30.31	769.9	8	—13.3	78	SW	6	2.7	.....	.....	10s	.....	.....	Inap.	Inap.	Cloudy	
Portland, Me.	.....	.....	30.00	762.0	3	—16.1	80	W	13	5.8	.....	0	0	.....	.....	0	0	Clear	
Portland, Oregon	.....	.....	30.16	766.1	35	1.7	62	SE	3	1.3	.....	.....	10s	.....	.....	0	0	Cloudy	
Punta Rassa, Fla.	.....	.....	30.31	769.9	49.5	9.7	59	N	13	5.8	.....	0	0	.....	.....	0	0	Clear	
Rochester, N. Y.	.....	.....	30.22	767.6	13	—10.6	72	W	15	6.7	.....	Haze	5s	W	W	0.33	8.4	Fair	
Salt Lake City, Utah	25.99	660.4	30.32	770.1	11	—11.7	79	S	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Sandy Hook, N. J.	.....	.....	30.22	767.6	18	— 7.8	68	W	24	10.7	.....	0	0	.....	.....	0	0	Clear	
San Diego, Cal.	.....	.....	30.21	767.3	51	10.9	86	Calm	0	0	.....	0	0	.....	.....	0.01	0.3	Clear	
San Francisco, Cal.	.....	.....	30.22	767.6	51	10.6	86	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Santa Fé, N. M.	23.35	593.1	29.89	759.2	25	— 3.9	63	N	8	3.6	.....	5k	0	W	.....	0.01	0.3	Fair	
Savannah, Ga.	.....	.....	30.40	773.7	34	1.1	79	NE	6	2.7	.....	0	0	.....	.....	0	0	Clear	
Shreveport, La.	.....	.....	30.53	775.4	36	2.2	70	E	2	0.9	.....	10cs	0	E	.....	0	0	Cloudy	
Smithville, N. C.	.....	.....	30.48	774.2	27	— 2.8	67	N	6	2.7	.....	0	0	.....	.....	0	0	Clear	
Springfield, Mass.	.....	.....	30.19	766.8	10	—12.2	46	N	4	1.8	.....	0	0	.....	.....	0	0	Clear	
St. Louis, Mo.	.....	.....	30.44	773.2	22	— 5.6	87	S	4	1.8	.....	0	0	.....	.....	0	0	Clear	
St. Marks, Fla.	.....	.....	30.45	773.4	31	— 0.6	79	N	4	1.8	.....	0	0	.....	.....	0	0	Clear	
St. Paul, Minn.	.....	.....	30.12	765.0	7	—13.9	77	SE	4	1.8	.....	0	0	.....	.....	0	0	Clear	
St. Paul's Island, Alaska	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Thatcher's Island, Mass.	.....	.....	30.09	764.3	6	—14.4	52	NW	24	10.7	.....	1k	0	NW	.....	C	0	Clear	
Toledo, Ohio	.....	.....	30.30	771.0	14	—10.0	81	SW	10	4.5	.....	8k	Haz	SW	SW	0.03	0.8	Cloudy	
Tucson, Arizona	27.74	704.6	30.29	769.4	29	— 1.7	.....	S	.....	.....	.....	0	0	.....	.....	0.04	1.0	Clear	
Tybee Island, Ga.	.....	.....	30.44	773.2	40	4.4	83	NE	20	8.9	.....	0	0	.....	.....	0	0	Clear	
Vicksburg, Miss.	.....	.....	30.55	776.0	30	— 1.1	78	E	4	1.8	.....	10ck	Sm'c	W	E	0	0	Fair	
Virginia City, M. T.	24.47	621.5	29.95	760.7	7.5	—13.6	66	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Washington, D. C.	.....	.....	30.41	772.4	20.5	— 6.4	66	W	6	2.7	.....	c	Sm'c	.....	.....	0	0	Clear	
Wilmington, N. C.	.....	.....	30.49	774.4	29	— 1.7	59	N	4	1.8	.....	0	Sm'c	.....	.....	0	0	Clear	

UNITED STATES SERIES.—Continued.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Lower. 0—10.	Clouds. Amount. Low'r. 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Wood's Holl, Mass.	.....	.....	30.15	765.8	14	—10.0	46	NW	22	9.8	.....	0	0	.....	.....	0	0	Clear	
Yankton, Dakota	28.85	732.8	30.26	768.6	11	—11.7	59	W	7	3.1	.....	0	0	.....	.....	0	0	Clear	
Yuma, Arizona	.....	.....	30.12	765.0	49	9.4	.....	NW	.....	.....	.....	0	0	.....	.....	0	0	Clear	
Sub-Series.																			
Kingston, Jamaica, W. I.	.....	.....	30.23	767.8	72	22.2	76	Calm	0	0	.....	2c	2s	.....	.....	0	0	.....	James Gall.
Navassa, W. I.	.....	.....	.....	.....	77	25.0	.....	NE	.....	.....	2	.....	.....	.....	.....	0	0	Cloudy	F. M. Everett.
Clifton, Ja., W. I.	27.24	691.9	30.05	763.3	65	18.3	73	NE	3.0	1.3	.....	0	0	.....	.....	0	0	Fine, clear	C. Partridge.
Paramaribo, D. Guiana, S.A.	.....	.....	30.07	763.8	77	25.0	87	SE	.....	.....	1	2c	4ks	E	.....	0.510	12.95	Fair	C. J. Hering.
Batavia, Dutch Guiana, S.A.	30.08	764.0	.....	.....	76.6	24.8	.....	N	.....	.....	.....	.....	.....	.....	.....	0.394	10.00	Cloudy	Dr. H. Groot.
Medellin, Colombia, S. A.	25.21	640.3	.....	.....	63 0	17.2	82	Calm	.....	.....	0	ock,k	0	.....	.....	0	0	Cloudy	Thomas Herran.
York Factory, B. A.	.....	.....	29.92	760.0	—21 0	—29.4	.....	NW	8	3.6	.....	0	0	.....	.....	0	0	Clear	J. Fortescue, W. Wood
Honolulu, Oahu, H. I.	.....	.....	30.10	764.5	66	18.9	94	ESE	.....	.....	2	.....	.....	.....	.....	0	0	Very clear	Daniel Smith.
Makawao, Maui, H. I.	.....	.....	30.01	762.2	69	20.6	74	Calm	.....	.....	0	.....	10k	.....	.....	0	0	.....	F. L. Clarke.

Note.—The originals give the amount of cloudiness by the scale 0 to 4, except York Factory, Makawao, Medellin and Paramaribo. The elevation of the barometer at Bismarck is 1,677 feet, or 511.1 meters; Cheyenne, 6,057.3 ft., or 1,846.2 m.; Clifton, about 2,892 ft. or 881.5 m.; Denver, 5,135 ft., or 1,565.2 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Florence, 1,750 (?) ft. or 172.5 (?) m.; Makawao, 2,205 ft., or 672.1 m.; Morgantown, 1,027.9 ft., or 313.3 m.; Medellin, 4,876 ft., or 1,486.2 m.; Mt. Washington, 6,285 ft., or 1,915.6 m.; North Platte, 2,846 ft., or 867.4 m.; Omaha, 1,054.6 ft., or 321.4 m.; Pike's Peak, 14,150.7 ft., or 4,313.1 m.; Salt Lake City, 4,362.2 ft., or 1,329.6 m.; Santa Fe, 6,862.2 (?) ft., or 2,091.6 (?) m.; Tucson, 2,513 (?) ft., or 772.1 (?) m.; Virginia City, 5,480 (?) ft., or 1,670.3 (?) m.; Yankton, 1,278 ft., or 389.5 m. The following constants are added in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Denver, 5.22 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fe, 6.84 in.; Tucson, 2.59 in.; Virginia City, 5.48 in. The elevation of Batavia is about 6 feet; the barometric readings need the addition of 0.2 mm. or 0.01 in. for reduction to sea-level.

UNITED STATES NAVAL SERIES.

By authority of the **SECRETARY OF THE NAVY.**

Furnished by the coöperation of the Navy Department, through Commodore Daniel Ammen, U. S. N., Chief of Bureau of Navigation.

STATIONS AND VESSELS.	True course toward—	Hourly rate in knots.	*Barometer as reported.		Temperature of the Air.		Relative Humidity.	Wind.			Clouds.				Rain-fall or melted snow in the past 24 hours.		State of Ocean.	Direction of swell from—	Weather.	Observer.
								Direction.	Velocity		Force.	Amount.		Direction.							
			Inches.	Millimeters.	Fahrenheit.	Centigrade.	Per cent.	From—	Miles per hour.	Meters per second.	0—10.	Up'er 0—10.	Low'r 0—10.	Up'er From—	Low'r From—	Inches.	Millimeters.				
Naval Academy, Annapolis, Md.			29.96	761.0	19	— 7.2	70	W			2		1		SW	0	0			Clear	
Naval Hospital, Annapolis, Md.			30.34	770.6	18	— 7.8	68	Calm			0		0			0	0				
Navy Yard, Mare Island, Cal.			30.28	769.1	51	10.6	96	ESE			4		2		W	0	0			Fair	
Navy Yard, Norfolk, Va.			30.50†	774.7†	22	— 5.6		NW			2		4cs							‡D. clouds.	
Navy Yard, Pensacola, Fla.			30.35	770.9	33.5	0.8	94	N			1		6		E	0	0			‡D. clouds.	
Navy Yard, Portsmouth, N.H.			30.02	762.5	3	—16.1		NW			6									Clear.	
Adams, Port Royal, S. C.			30.48	774.2	45	7.2	92	NE			3		0							Blue sky.	
Ajax, Port Royal, S. C.			30.03	762.7	37	2.8		N			2		0							Pleasant.	
Canonicus, New Orleans, La.			30.10†	764.5†	41	5.0		NNE			3		2		W					Clear.	
Catskill, Port Royal, S. C.			30.35†	770.9†	37	2.8		ENE			3		0					Rippling.		Fair	
Colorado, New York, N. Y.			30.36	770.9	17	— 8.3		W			3–4		4		SE	0	0			‡D. clouds.	
Dictator, Port Royal, S. C.			30.45	773.4	36	2.2	100	NNE			2		0			0	0			Blue sky.	
Essex, Hampton Roads, Va.			30.45	773.4	30	— 1.1	89	W			3		2		W					‡D. clouds.	
Hartford, Hampton Roads, Va.			30.45	773.4	[illegible]	— 0.6		W			2		1			0	0			Pleasant.	
Huron, Port Royal, S. C.			30.48	774.2	40.5	4.7	78	NE			2		0							Blue sky.	
Lehigh, Port Royal, S. C.			31.35†	796.3.	38	3.3	63	NE			2		0							Pleasant.	
Manhattan, Port Royal, S. C.			30.42†	772.7.	36	2.2		NNE			2		0					Smooth		Blue sky.	
Michigan, Erie, Pa.			30.20	767.1	11	—11.7	40	SSW			1		5		SW					Clear	
Monongahela, Baltimore, Md.			30.28	769.1	23	— 5.0		SW			1–3		0							Blue sky.	
New Hampshire, Port Royal, S. C.			30.62	777.7	40	4.4	91	NE			2		0					Smooth		Blue sky.	
Ossipee, New Orleans, La.			30.54	775.7	39	3.9		ENE			4		8							‡D. clouds.	
Plymouth, Pensacola, Fla.			30.50	774.7	42	5.6	66	NNE			4		7		E	0	0	Smooth		Clear.	
¶ Rio Bravo, Matamoras, Mex.			30.25	768.3	45	7.2	76	W			1		10							‡D. clouds.	
Santee, Annapolis, Md.			29.90	759.4	21	— 6.1		W			2		1		SW					Clear.	
St. Louis, League Island, Pa.			30.14	765.5	19	— 7.2		SW			7		7		W	0	0			Cloudy.	
Tallapoosa, Washington, D. C.			30.25	768.3	19	— 7.2		WSW			3		2							‡D. clouds.	
Wabash, Boston, Mass.			30.18	766.1	4	—15.6		NW			0–1		0							Hazy.	
Wyoming, Washington, D. C.			30.54	775.7†	21	— 6.1		WNW			1		1							‡D. clouds.	

* It is not known that the barometer is corrected for temperature, instrumental error or elevation. † Aneroid Barometer. ‡ Detached clouds. ¶ Barometer corrected for instrumental error and reduced to sea-level.

UNITED STATES MARINE SERIES

REPORTED TO THE OFFICE OF THE CHIEF SIGNAL OFFICER OF THE ARMY.

NAMES OF VESSELS.	True course toward—	Hourly rate in knots.	Barometer reduced to sea-level.		Temperature of the Air.		Relative Humidity.	Wind.				Clouds.				State of Ocean.	Direction of swell from—	Weather.	Observer.
								Direction.	Velocity.		Force.	Amount.		Direction.					
												Up'er	Low'r	Upper.	Lower.				
			Inches.	Millimeters.	Fahrenheit.	Centigrade.	Per cent.	From—	Miles per hour.	Meters per second.	0—10.	0—10.	0—10.	From—	From—				
PACIFIC MAIL S. S. CO. MARINE SERIES. Furnished by the coöperation of ————, President; Williams, Blanchard & Co., Agents.																			
OCCIDENTAL AND ORIENTAL S. S. CO. MARINE SERIES. Furnished by the coöperation of George H. Bradbury, President; T. H. Goodman, Agent.																			
S. S. Belgic																			Capt. John Metcalf.
S. S. Gaelic																			Capt. W. H. Kidley.
S. S. Oceanic																			Capt. H. Parsell.
NORTH GERMAN LLOYD OF BREMEN MARINE SERIES. Furnished by the coöperation of A. Schumacher & Co., Agents.																			
Steamer Nürnberg, N. 39°, 44′, W. 66°, 21′	SW ¾ W		29.90	759.4	28.6	— 1.9		WNW			8		.ks		W	High sea	W,NW	Snow-squalls	Capt. A. Jaeger.
MARINE SERIES. (Miscellaneous.) Furnished by the coöperation of Captain James Jorgensen.																			
Schooner Addie Fuller, at Brunswick, Ga			30.34	770.6	34	1.1	90	Calm	0	0		0	0					Clear	Capt. James Jorgensen.

NOTE.—The schooner Addie Fuller gives the amount of cloudiness by the scale 0 to 4.

COLLATED AT THE OFFICE OF THE CHIEF SIGNAL OFFICER OF THE ARMY, WASHINGTON, D. C.

The records which appear in this Bulletin are copied from the regular exchanges of this office, made in each instance in compliance with an especial request and are published for the uses of the coöperating observers. The barometric readings in the first two columns are reduced to freezing and their respective standards; those in the second two also to mean sea-level. The "weather" is generally published as given.

When the distinction between the upper and lower strata of clouds is not reported, the *kinds* or *types*, viz: cirrus, cumulus, stratus, nimbus, scud, fracto, pallio, haze, fog and smoke, as indicated, respectively, by the letters c, k, s, n, d, f, p, hz., fg. and sm'e, are generally published with the amount in the lower-cloud column. The distinction between the upper and lower strata is carefully made in the United States Series and a portion of the Canadian Series, and the types are indicated by the above letters or their combinations in the proper column.

Albert J. Myer

Brig. Gen. (Bvt. Asst.,) Chief Signal Officer, U. S. A

BULLETIN

OF

INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON JANUARY 26, 1877.

7:35 A. M. WASHINGTON mean time.

6:7 A. M. MEXICO mean time.
7:7 A. M. SAN JOSE mean time.
0:6 P. M. LISBON mean time.
0:28 P. M. MADRID mean time.
0:43 P. M. GREENWICH mean time.
0:53 P. M. PARIS mean time.
1:1 P. M. BRUSSELS mean time.
1:4 P. M. UTRECHT mean time.
1:13 P. M. BERNE mean time.

1:26 P. M. CHRISTIANIA mean time.
1:33 P. M. COPENHAGEN mean time.
1:33 P. M. ROME mean time.
1:37 P. M. BERLIN mean time.
1:49 P. M. VIENNA mean time.
1:55 P. M. STOCKHOLM mean time.
2:18 P. M. ATHENS mean time.
2:39 P. M. CONSTANTINOPLE mean time.
2:44 P. M. ST. PETERSBURG mean time.

10:2 P. M. TOKEI mean time.

ALGERIAN SERIES.

Furnished by the coöperation of General d'Eudeville, Commandant Supérieur du Génie in Algeria.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Nemours	.....	.....	30.24	768.2	62.6	17.0	50	Calm	.....	.....	0	.....	1	.....	.....	0	0	Clear	Charnot.
Algiers	.....	.....	30.13	765.4	60.4	15.8	.....	WNW	.....	.....	4	.....	1	.....	.....	0	0	Clear	Peter.
La Calle	.....	.....	29.88	759 0	61.0	16.1	53	NNW	.....	.....	3	.....	2	.....	.....	0.118	3.0	Clear	Fleury.
Tunis	.....	.....	29.85	758.1	57.2	14.0	.....	NW	.....	.....	5	.....	2	.....	.....	0	0	Clear	Jacques.
Sfax	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Saida	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Tebessa	.....	.....	30.20	767.0	64.4	18.0	9	NW	.....	.....	1	.....	1	.....	.....	0	0	Clear	Millot.
Geriville	.....	.....	30.00	762.0	46.2	7.9	.....	W	.....	.....	2	.....	2	.....	.....	0	0	Clear	Bourgeois.
Laghouat	.....	.....	30.10	764.4	50.0	10.0	7	NNW	.....	.....	4	.....	0	.....	.....	0	0	Clear	Lemaillot.
Biskra	.....	.....	30.08	764.1	60.8	16.0	26	W	.....	.....	1	.....	0	.....	.....	0	0	Clear	Guyot.
.....	.....	.....	30.07	763.6	65.7	18.7	34	NW	.....	.....	4	.....	4	.....	.....	0	0	Fair	Kuntz.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—In the originals the distinction between the amount of upper and lower clouds is apparently not made. The weather is published as given. The rain-fall is measured at 7 a. m., local time.

AUSTRIAN SERIES.

Furnished by the cooperation of Professor Ferdinand Osnaghi, Director of the Imperial and Royal Central Meteorological Institute at Vienna.

Agram	.....	.....	29.90	759.4	28.9 — 1.7		92	NE	.....	.....	1	.....	10	.....	.....	0.008	0.2	Snowing	Prof. Ivan Stozir.
Cracow, I. R. Observatory	.....	.....	30.07	763.8	19.0 — 7.2		100	NE	.....	.....	2	.....	0	.....	.....	0	0	.....	Dr. Wierzbiski.
Eperies	.....	.....	30.01	762.2	22.6 — 5.2		86	Calm	.....	.....	0	.....	9c,8	.....	N	0.073	1.85	.....	Julius Mikolik.
Gratz	.....	.....	29.88	758.9	29.8 — 1.2		82	E	.....	.....	2	.....	10	.....	.....	0.354	9.0	.....	Andreas Rospini.
Hermannstadt	28.57	725.7	29.88	758.9	29.8 — 1.2		82	E	.....	.....	2	.....	10	.....	.....	0.354	9.0	.....	Andreas Rospini.
Kremsmünster	28.53	724.6	30.05	763.2	23.9 — 4.5		79	E	.....	.....	2	.....	10	.....	.....	0	0	.....	Prof. Reissenberger
Lemberg	28.42	721.8	29.83	757.6	25.2 — 3.8		91	Calm	.....	.....	0	.....	10	.....	.....	0.413	10.5	.....	Prof. C. Wagner.
Nyiregyhaza	.....	.....	30.19	766.9	10.4 —12.0		96	SE	.....	.....	2	.....	10	.....	.....	0.004	0 1	.....	Dr. T. Stanecki.
Pola	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Habzsuda Daniel.
Szegedin	.....	.....	29.77	756.1	42.1	5.6	85	SSW	.....	.....	2	.....	10s	.....	.....	0.038	0.97	.....	I.R.Hydrographic Of'ce.
Trieste	.....	.....	29.99	761.7	29.8 — 1.2		84	SE	.....	.....	2	.....	10	.....	.....	0	0	.....	Karl Stancel.
Vienna	.....	.....	29.82	757.4	35.6	2.0	83	Calm	.....	.....	0	.....	10	.....	.....	0	0	Covered	Prof. V. Farolfi.
.....	.....	.....	29.81	757.2	27.9 — 2.3		98	SSE	.....	.....	4	.....	10	.....	.....	0.244	6.2	Snowing	I. R. Central Met. Obs'y.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 7 p. m., local time. The elevation of Gratz is 343.5 meters, or 1,126.9 feet: Hermannstadt, 407.8 meters, or 1,337.9 feet; Kremsmünster, 383.6 meters, or 1,258.5 feet.

BELGIAN SERIES.

Furnished by the co-peration of J. C. Houzeau, Director of the Royal Observatory at Brussels.

Arlon	.....	.....	29.99	761.7	34.2	1.2	86	WNW	.....	.....	3	.....	10	.....	.....	0.091	2.3	.....	.....
Brussels	.....	.....	29.93	760.2	41.2	5 1	75	WNW	.....	.....	7	.....	9	.....	NW	0.114	2.90	.....	Royal Observatory.
Furnes	.....	.....	29.95	760.8	41.4	5.2	71	NNW	.....	.....	5	.....	7	.....	.....	0.193	4.9	.....	.....
Mneseyck	.....	.....	29.82	757.5	40.3	4.6	91	WNW	.....	.....	7	.....	8	.....	.....	0.098	2.5	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—In the originals, the weather is occasionally given in general notes.

BRITISH SERIES

Furnished by the coöperation of Robert H. Scott, Esq., Director of the Meteorological Office, London, Alexander Buchan, Secretary of the Scottish Meteorological Society, Edinburgh, and the respective Observers.

STATIONS.	Barometer. Corrected for instrumental error and temperature. Inches.	Barometer. Corrected for instrumental error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Upper. 0—10.	Clouds. Amount. Lower. 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Aberdeen	.....	.....	30.00	762.0	40.4	4.4	.....	W	7	3.1	.....	.....	0	.....	.....	0	0	Blue sky.....	William Boswell.
Ardrossan	.....	.....	30.07	763.8	43	6.1	.....	WSW	.....	.....	2	.....	5	.....	.....	.....	.....	*D. clouds....	William McNeil.
Armagh, Observatory	.....	.....	30.13	765.3	39.4	4.1	.....	SSW	10	4.5	.....	.....	6	.....	.....	.....	.....	*D. clouds....	S. Call, for Dr. Robinson.
Birr Castle, (Parsonstown)	.....	.....	30.14	765.5	43.2	6.2	.....	S	.....	.....	1	.....	10	.....	.....	.....	.....	Overcast.....	J. Dreyer.
Bradford	.....	.....	30.08	764.0	40.3	4.6	.....	W	.....	.....	2	.....	3	.....	.....	0.07	1.8	*D. clouds....	J. McLandsborough.
Bridgetown, (Barbados)	.....	.....	30.06	763.5	78.5	25.8	.....	NE	.....	.....	3	.....	8	.....	.....	.....	.....	Overcast.....	Sergt. J. F. Halanen, A.
Cambridge, Observatory	.....	.....	30.07	763.8	43.0	6.1	.....	NNW	.....	.....	2	.....	1	.....	.....	.....	.....	*D. clouds....	H. Todd. [H. C.
Cardington	.....	.....	30.10	764.5	41.0	5.0	.....	NW	.....	.....	1	.....	1	.....	.....	.....	.....	Blue sky.....	John McLaren.
Carlisle	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	T. Bell, for J. Cartmell.
Chatham, School M. E.	.....	.....	30.14	765.5	46.2	7.9	.....	NW	.....	.....	3	.....	2	.....	.....	.....	.....	Blue sky.....	Maj. C. N. Martin, R.E.
Dartmoor	28.75	730.2	30.31	769.9	39.6	4.2	.....	N	.....	.....	2	.....	5	.....	.....	.....	.....	*D. clouds....	R. E. Power.
Davos Platz, (Switzerland)	24.60	624.8	.....	.....	22.8	— 5.1	79	NE	.....	.....	1	.....	10	.....	.....	0.280	7.11	Snowing.....	Francis Redford, M. A.
Donaghadee	.....	.....	30.12	765.0	46	7.8	.....	SW	.....	.....	3	.....	2	.....	.....	.....	.....	*D. clouds....	J. Mac Gowan.
Dover	.....	.....	30.04	763.0	41	5.0	.....	NW	.....	.....	4	.....	2	.....	.....	.....	.....	¼ clouded...	J. Costello.
Eccles, (near Manchester)	.....	.....	30.10	764.5	43.9	6.6	.....	NW	7.4	3.3	.....	.....	6	.....	.....	.....	.....	*D. clouds....	Thomas Mackereth.
Falmouth, Observatory	.....	.....	30.28	769.1	46.4	8.0	.....	WNW	.....	.....	1	.....	5	.....	.....	.....	.....	*D. clouds....	The Staff.
Fort Napier, (Natal)	27.69	703.3	29.92	760.0	71.5	21.9	.....	SE	.....	.....	1	.....	10	.....	.....	.....	.....	Overcast.....	P'vt. G. Salmon, A. H. C
Free Town, (Sierra Leone)	.....	.....	29.90	759.4	85	29.4	.....	NE	.....	.....	1	.....	3	.....	.....	.....	.....	*D. clouds....	
Galway, Queen's College	.....	.....	30.04	763.0	43	6.1	.....	SW	.....	.....	2	.....	4	.....	.....	.....	.....	*D. clouds....	Prof. A. H. Curtis.
Gibraltar, (Mediterranean)	.....	.....	30.22	767.6	65.6	18.7	.....	SW	.....	.....	4	.....	2	.....	.....	.....	.....	*D. clouds....	Corpl. C. Aitken, A.H.C.
Glasgow, Observatory	.....	.....	30.05	763.3	38.9	3.8	.....	SW	.....	.....	2	.....	1	.....	.....	.....	.....	Blue sky.....	Lewis Stuart.
Great Yarmouth	.....	.....	29.98	761.5	41	5.0	.....	NW	.....	.....	4	.....	4	.....	.....	.....	.....	Hazy.....	G. T. Watson.
Greenwich, Royal Obs'y	.....	.....	30.11	764.8	40.0	4.4	.....	NNW	.....	.....	3	.....	3	.....	.....	0haze	0haz	Blue sky.....	The Staff, for G. B. Airy.
Guernsey	.....	.....	30.22	767.6	46	7.8	.....	NW	.....	.....	5	.....	3	.....	.....	.....	.....	*D. clouds....	Dr. S. E. Hoskins.
Helston	.....	.....	30.27	768.8	47	8.3	.....	NW	.....	.....	4	.....	4c	.....	.....	0.17	4.3	*D. clouds....	M. P. Moyle.
Holyhead	.....	.....	30.15	765.8	44	6.7	.....	W	.....	.....	4	.....	1	.....	.....	.....	.....	Blue sky.....	John Tilston.
Kew, Observatory	.....	.....	30.12	765.0	41.7	5.4	.....	NW	19	8.5	.....	.....	2	.....	.....	.....	.....	*D. clouds....	The Staff.
Kingstown	.....	.....	30.18	766.6	42	5.6	.....	WNW	.....	.....	3	.....	6	.....	.....	.....	.....	*D. clouds....	George Mitchell.
Leicester Museum	.....	.....	30.11	764.8	42.0	5.6	.....	NW	.....	.....	3	.....	2	.....	.....	.....	.....	*D. clouds....	Wm. J. Harrison, F.G.S.
Malta, (Mediterranean)	.....	.....	29.90	759.4	57.2	14.0	.....	NW	.....	.....	3	.....	6c	.....	.....	.....	.....	*D. clouds....	Corp'l. P. Bravis, A.H.C.
Nairn	.....	.....	.....	.....	37	2.8	.....	W	.....	.....	1	.....	5	.....	.....	.....	.....	½ clouded...	W. D. Penny.
Nassau, (Bahamas)	.....	.....	30.22	767.6	71	21.7	.....	NE	.....	.....	2	.....	1	.....	.....	.....	.....	*D. clouds....	Surg. Maj. Henry.
Nottingham, Observatory	.....	.....	30.10	764.5	43.0	6.1	.....	WNW	.....	.....	4	.....	0	.....	.....	0.009	0.23	Blue sky.....	E. J. Lowe, F. R. S.
Oscott, St. Mary's College	.....	.....	30.12	765.0	42.0	5.6	.....	NW	.....	.....	4	.....	1	.....	.....	.....	.....	*D. clouds....	Rev. Stephen Whitty.
Oxford, Radcliffe Obs'y	.....	.....	30.12	765.0	42	5.6	.....	NW	.....	.....	2	.....	1	.....	.....	.....	.....	Blue sky.....	J. Lucas.
Plymouth	.....	.....	30.23	767.8	46.8	8.2	.....	NW	.....	.....	2	.....	4	.....	.....	.....	.....	*D. clouds....	John Merrifield.
Roche's Point	.....	.....	30.21	767.3	46	7.8	.....	W	.....	.....	3	.....	5	.....	.....	.....	.....	Cloudy.....	W. Kennedy.
Saint Ann's Head	.....	.....	30.21	767.3	46	7.8	.....	WNW	.....	.....	2	.....	4	.....	.....	.....	.....	*D. clouds....	John C. Walker.
Saint Helier, (Jersey)	.....	.....	30.22	767.6	48.0	8.9	.....	NNW	.....	.....	4	.....	2	.....	.....	.....	.....	¾ clouded..	A. P. Amy.
Sandwick Manse, (Orkneys)	.....	.....	29.92	760.0	40.2	4.6	.....	SW	15	6.7	.....	.....	4	.....	.....	.....	.....	*D. clouds....	Rev. C. Clouston, LL. D.
Scarborough	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	F. Shaw.
Scutari Cemetery, (Turkey)	.....	.....	29.68	753.9	44.0	6.7	.....	NE	.....	.....	3	.....	10	.....	.....	.....	.....	Drizzling....	Sergt. W. H. Lyne.
Sheffield	.....	.....	30.08	764.0	42.6	5.8	.....	NW	.....	.....	3	.....	2	.....	.....	0.060	1.68	Blue sky.....	W. F. Cooper.
Silloth Rectory	.....	.....	30.09	764.3	44.8	7.1	72	W	.....	.....	3	.....	0	.....	.....	0.090	2.29	Blue sky.....	Rev. Francis Redford.
Stonyhurst, Observatory	.....	.....	30.11	764 8	40.8	4.9	.....	W	.....	.....	1	.....	8	.....	.....	.....	.....	*D. clouds....	Rev. S. J. Perry.
Stornoway, Lews C., (Hebr.)	.....	.....	29.87	758.7	39	3.9	.....	SW	.....	.....	1	.....	2	.....	.....	.....	.....	Blue sky.....	John Smith.
Stratfield Turgiss	.....	.....	30.14	765.5	42.6	5.9	.....	NW	.....	.....	1	.....	0	.....	.....	.....	.....	Blue sky.....	Rev. Charles H. Griffith.
Thurso	.....	.....	29.88	758.9	41	5.0	.....	SW	.....	.....	1	.....	0	.....	.....	.....	.....	Blue sky.....	John Trotter.
Truro, Royal Institution	.....	.....	30.26	768.6	50	10.0	.....	NW	.....	.....	2	.....	1	.....	.....	.....	.....	Blue sky.....	W. Newcombe.
Valencia, Observatory	.....	.....	30.16	766.1	46.9	8.3	.....	SSW	29	13.0	.....	.....	4	.....	.....	.....	.....	*D. clouds....	The Staff.
SUB-SERIES.																			
Calf of Man, (Isle of Man)	.....	.....	.....	.....	42	5.6	.....	WNW	.....	.....	6	.....	0	.....	.....	0.40	10.2	.....	Henry Mercer.
Cape Good Hope, Obs'y	.....	.....	29.67	758.7	93.0	33.9	26	WNW	7	3.1	.....	0	1	.....	.....	.....	.....	.....	The Staff, for E. J. Stone.
Hobart Town, (Tasmania)	.....	.....	29.81	757.2	62.5	16.9	94	W	.....	.....	3	.....	4k	.....	.....	0	0	.....	Francis Abbott, F.R.A.S.
Leith, Restalrig Park	.....	.....	30.08	764.0	39.1	3.9	.....	W	.....	.....	2	.....	.....	.....	.....	0.04	1.0	Fine.....	Andrew Gibb.
Mauritius, Observatory	.....	.....	29.88	758.9	80.0	26.7	76	ESE	2.8	1.3	.....	0	6	.....	.....	1.46	37.1	*D. clouds....	C. Meldrum.
Melbourne, Observatory	.....	.....	30.10	764.5	57.8	14.3	54	SSW	20	8.9	.....	.....	10	.....	.....	0	0	Dull	R. L. J. Ellery.
Monach L't-house, (Hebrides)	.....	.....	29.82	757.4	45	7.2	.....	W	.....	.....	7	.....	10	.....	.....	0.2	5.1	.....	J. Youngclause.
North Unst, (Shetland Is.)	.....	.....	29.83	757.7	42	5.6	.....	W	.....	.....	4	2	3	.....	.....	.....	.....	.....	Robert Burnet.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—Generally, the originals do not give the relative humidity, rain-fall, or distinction between upper and lower clouds. The originals give the wind direction to 32 points and weather by the Beaufort notation. The originals give the barometer for Aberdeen, Cardington, Galway, Oxford, St. Helier, Sandwick, Scarborough, Stonyhurst, Leith, Monach and North Unst as read off and the amount of cloudiness for Stornoway by the scale 0 to 4. The wind-force is given by the scale 0 to 12 in the official series; 0 to 6 in the sub-series; except in lbs. per square foot for Greenwich and Hobart Town. The rain-fall is measured at Aberdeen at 10 a. m.; Bradford, 9 a. m.; Hobart Town, 7:30 a. m.; Nottingham, 6 p. m.; Mauritius, 9 a. m., local time. The elevation of Dartmoor is 1,400 feet, or 426.7 meters; Davos Platz, 5,1052 feet, or 1,556.0 meters; Fort Napier, 2,200 feet, or 670.6 meters. *Detached clouds.

By authority of the
MINISTER OF FOREIGN AFFAIRS.

COSTA RICA SERIES.

Furnished by the coöperation of Senor Federico Maison, Director of the Central Office of Statistics and Meteorology.

San José	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
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DANISH SERIES.

Furnished by the coöperation of Captain N. Hoffmeyer, Director of the Royal Danish Meteorological Institute at Copenhagen.

Copenhagen	.....	.....	30.08	764.1	27.5	— 2.5	72	SE	.....	.....	7	.....	7	.....	.....	.....	.....	.....	.....
Farõe	.....	.....	29.95	760.7	28.9	— 1.7	92	SE	.....	.....	6	.....	10	.....	.....	.....	.....	.....	.....
Godthaab, (Greenland)	.....	.....	28.93	734.8	5.0	—15.0	82	NE	.....	.....	4	.....	2	.....	.....	.....	.....	.....	.....
Stykkisholm, (Iceland)	.....	.....	29.09	738.9	29.3	— 1.5	96	SE	.....	.....	6	.....	8	.....	.....	.....	.....	.....	.....
Thorshavn, (Farõe)	.....	.....	29.68	753.8	30.9	4.4	71	WSW	.....	.....	4	.....	5	.....	.....	.....	.....	.....	.....
Vestervig	.....	.....	30.05	763.2	29.1	— 1.6	96	E	.....	.....	6	.....	6	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
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NOTE.—The originals give the wind-force by the scale 0 to 6; occasionally, weather by Vienna symbols; no distinction between the amount of upper and lower clouds.

FRENCH SERIES.

Furnished by the co-operation of His Excellency, U. J. Le Verrier, Director of the Paris Observatory, and the respective Observers.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Alençon	.....	.....	30.17	766.2	42.8	6	73	NW	.....	.....	6	.....	5kn	.....	NW	0.102	2.6	Cloudy.....	Normal School.
Amiens	.....	.....	30.13	765.2	42.4	5.8	85	NW	.....	.....	3	.....	5	.....	W	0.126	3.2	Cloudy.....	Normal School.
Avignon	.....	.....	30.03	762.8	48.2	9	86	N	.....	.....	4	.....	2	.....	N	0	0	Slightly cl'dy	Normal School.
Bar-sur-Seine	.....	.....	30.10	764.4	39.0	3.9	73	N	.....	.....	3	.....	10	.....	NW	0.197	5.0	Covered	C. Saillard.
Beaumette, (near Angers)	.....	.....	30.22	767.5	45.1	7.3	57	NW	12.5	5.6	.....	.....	.....	.....	NNW	0	0	.....	Beaumette Observ'tory.
Beauvais	.....	.....	30.12	765.0	41.5	5.3	63	NW	.....	.....	3	.....	5	.....	NW	0.138	3.50	Cloudy.....	Normal School.
Besançon	.....	.....	30.11	764.8	36.0	2.2	93	NNE	.....	.....	3	.....	8	.....	NW	0.559	14.2	Very cloudy	Normal School.
Bourg en Bresse	.....	.....	30.15	765.7	39.2	4	70	NNW	.....	.....	4	.....	5kn	.....	SE	0	0	Cloudy.....	Normal School.
Bourges	.....	.....	30.17	766.4	42.4	5.8	91	WNW	.....	.....	4	.....	2	.....	NW	0.059	1.5	Slightly cl'dy	Normal School.
Brest	.....	.....	30.24	768.2	48.0	8.9	67	NNW	.....	.....	3	.....	2	.....	NNW	0.108	2.75	Squally.....	Naval Observatory.
Carcassonne	.....	.....	30.19	766.8	50.0	10	52	E	.....	.....	2	.....	5	.....	W	0.059	1.5	Cloudy.....	Normal School.
Caen	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Chartres	.....	.....	30.16	766.0	42.3	5.7	68	NNW	.....	.....	3	.....	1	.....	SW	0.059	1.5	.....	Normal School.
Châlons-sur-Marne	.....	.....	29.97	761.2	42.4	5.8	73	NW	.....	.....	4	.....	5k	.....	SE	0.236	6.0	Cloudy.....	Normal School.
Clermont	.....	.....	30.16	766.1	41.0	5.0	56	NW	.....	.....	2	.....	5	.....	NW	0.122	3.1	Cloudy.....	Puy de Dome Obs'y.
Commercy	.....	.....	30.02	762.5	37.4	3	86	NW	.....	.....	4	.....	5kn	.....	SW	0.106	2.7	Cloudy.....	Normal School.
Commune de Gréasque*	.....	.....	29.98	761.4	43.0	6.1	42	NW	.....	.....	8	.....	5	.....	NW	0	0	.....	M. Kina.
Grenoble	.....	.....	30.02	762.5	41.2	5.1	71	NNW	.....	.....	4	.....	5ks	.....	NW	0.47	12.	Cloudy.....	Normal School.
La Roche-sur-Yon	.....	.....	30.30	769.6	46.8	8.2	59	W	.....	.....	1	.....	1	.....	E	0.051	1.3	Slightly cl'dy	Normal School.
Le Mans	.....	.....	30.26	768.7	42.6	5.9	63	NW	.....	.....	2	.....	8	.....	NW	0.138	3.5	Very cloudy	Normal School.
Lons-Le-Saulnier	.....	.....	30.04	762.9	39.7	4.3	71	NE	.....	.....	1	.....	10	.....	.....	0.362	9.20	Rain & snow	Normal School.
Lorient	.....	.....	30.32	770.2	49.6	9.8	47	NW	.....	.....	2	.....	2	.....	NNW	0	0	Slightly cl'dy	Naval Observatory.
Mâcon	.....	.....	30.18	766.6	41.2	5.1	87	NW	.....	.....	4	.....	5	.....	NW	0.091	2.3	Cloudy.....	Normal School.
Metz	.....	.....	30.04	763.1	36.9	2.7	89	W	.....	.....	6	.....	9s	.....	W	0.331	8.4	.....	M. Schuster.
Mirecourt	.....	.....	30.05	763.2	35.6	2	82	NW	.....	.....	2	.....	10	.....	SE	0	0	Covered	Normal School.
Nismes	.....	.....	30.07	763.7	50.4	10.2	72	NW	.....	.....	4	.....	0	.....	.....	0	0	Clear.....	Normal School.
Orleans	.....	.....	30.12	765.0	42.1	5.6	73	WNW	.....	.....	2	.....	0	.....	.....	0	0	Clear.....	Normal School.
Paris, Observatory	.....	.....	30.12	765.0	40.8	4.9	68	NNW	.....	.....	3	.....	4ck	.....	NNW	0.129	3.28	Cloudy.....	National Observatory.
Parthenay	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Privas	.....	.....	30.09	764.3	40.6	4.8	.....	NW	.....	.....	4	.....	2	.....	NW	0	0	Slightly cl'dy	Normal School.
Rochefort, Observatory	.....	.....	30.30	769.5	51.3	10.7	63	NW	.....	.....	3	.....	10	.....	SE	0	0	Covered	Naval Observatory.
Rouen	.....	.....	30.14	765.6	45.9	7.7	81	NW	.....	.....	2	.....	1	.....	N	0.146	3.7	Slightly cl'dy	Normal School.
Saint Lo	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Tarbes	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Villefranche	29.15	740.5	30.23	767.7	62.6	17	55	W	.....	.....	2	.....	10	.....	.....	0	0	Covered	Normal School.
	.....	.....	30.20	767.1	42.1	5.6	90	NE	.....	.....	1	.....	5	.....	N	0.244	6.2	Cloudy.....	Normal School.
SUB-SERIES.																			
Fort de France, Martinique	.....	.....	29.92	760.0	79.5	26.4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	L'Abbé Marchési.
Marseilles	.....	.....	29.95	760.7	47.1	8.4	39	NW	.....	.....	6	.....	5	.....	.....	0	0	Partly cl'dy.	Marseilles Observatory.
Mont-Louis	24.86	631.4	30.17	766.4	34.2	1.2	47	WNW	3.7	1.67	.....	.....	5	.....	WNW	0	0	.....	—. Falguère.
Montsouris, Paris	.....	.....	30.10	764.5	40.1	4.5	75	NW	.....	.....	3	.....	5	.....	WNW	0.130	3.3	Rain & hail.	Montsouris Observatory
Perpignan	.....	.....	30.14	765.5	51.1	10.6	42	NW	29.8	13.33	.....	.....	1	.....	NW	0	0	.....	Dr. Fines.
Pic du Midi, (Summit,) H. P.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. Baylac.
Pic du Midi, (Plantade,) H. P.	22.48	570.9	.....	.....	16.3	— 8.7	.....	NW	.....	.....	5	.....	10	.....	.....	1.571	39.9	Snowy.....	General de Nansouty.
Saint Maur, (near Paris)	.....	.....	30.11	764.8	42.6	5.9	67	NW	.....	.....	3	.....	8	.....	.....	0.138	3.5	Cloudy.....	E. Renou.
Toulouse	.....	.....	30.26	768.5	49.3	9.6	59	NW	.....	.....	2	.....	7	.....	.....	0.102	2.6	.....	Toulouse Observatory.
Tours	.....	.....	30.21	767.3	44.2	6.8	60	NNW	.....	.....	3	.....	7	.....	NW	0.067	1.7	.....	C. Marquet.
Versailles, (near Paris)	.....	.....	30.11	764.8	41.7	5.4	66	NW	.....	.....	2	.....	7	.....	.....	0.120	3.05	Cloudy.....	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai)	.....	.....	30.59	776.9	30.7	— 0.7	59	N	6.2	2.75	.....	.....	10	.....	.....	0	0	Lunar halo..	Marc Dechevrens, S. J.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—Generally, the originals give the wind-force by the scale 0 to 7; no distinction between upper and lower clouds, and, in the official series, the amount by the scale 0 to 4; the rain-fall as measured at 7, 8 or 9 a. m., local time; at Clermont, 9 a. m. of the following day; the weather in general terms as published. The elevation of Clermont is 388 meters, or 1,272.9 feet; Commune de Gréasque, 322 meters, or 1,056.4 feet; Tarbes, 308 meters, or 1,010 feet; Mont-Louis, 1,586.40 meters, or 5,204.8 feet; Pic du Midi, (Summit,) 2,877 meters, or 9,439.1 feet; Pic du Midi, (Plantade,) 2,366 meters, or 7,762.6 feet. In correcting the Mont-Louis barometric observations for altitude, the constant 135. millimeters has been added. *Bouches-du-Rhône

GERMAN SERIES.

Furnished by the coöperation of Professor Dr. G. Neumayer, Director of the German Naval Observatory, Hamburg.

Bamberg	.....	.....	29.67	753.7	32.7	0.4	85	SE	.....	.....	1	.....	10	.....	.....	0.315	8.0	Snowing.....	Prof. T. Hoh.
Berlin	.....	.....	29.93	760.3	28.4	— 2.0	70	SE	.....	.....	3	.....	3	.....	.....	0	0	.....	Prof. Arndt.
Breslau	.....	.....	29.98	761.5	22.3	— 5.4	90	E	.....	.....	3	.....	3	.....	.....	0	0	.....	Royal University Obs'y.
Carlsruhe	.....	.....	29.91	759.7	38.5	3.6	80	SW	.....	.....	4	.....	10	.....	.....	0.567	14.4	.....	A. Senz.
Cassel	.....	.....	29.69	754.1	39.2	4.0	73	SW	.....	.....	3	.....	10	.....	W	0.114	2.9	Snowing.....	r. H. Möhl.
Crefeld	.....	.....	29.75	755.7	42.6	5.9	72	NW	.....	.....	6	.....	9	.....	.....	0.51	13.	.....	irector Lose.
Emden	.....	.....	29.87	758.7	28.2	— 2.1	90	ENE	.....	.....	3	.....	10	.....	.....	0.165	4.2	.....	Prof. Prestel.
Frankfort on the Main	.....	.....	29.81	757.1	38.3	3.5	83	WSW	.....	.....	1	.....	9	.....	.....	0.484	12.3	Raining.....	Physical Society.
Friedrichshafen	28.50	723.9	29.98	761.5	37.0	2.8	79	WSW	.....	.....	7	.....	5	.....	.....	0.031	0.8	Snowing.....	M. Wilhelm.
Hamburg	.....	.....	29.82	757.4	27.5	— 2.5	77	ESE	.....	.....	9	.....	8k	.....	.....	Inap.	Inap.	Snowy.....	Captain F. Hegemann.
Kiel	.....	.....	29.89	759.3	27.5	— 2.5	84	ENE	.....	.....	5	.....	8	.....	.....	0	0	.....	Prof. G. Karsten.
Königsberg, (Prussia)	.....	.....	30.29	769.3	19.8	— 6.8	74	E	.....	.....	5	.....	5	.....	.....	0	0	.....	Prof. E. Luther.
Köslin	.....	.....	30.13	765.3	21.6	— 5.8	.....	ESE	.....	.....	4	.....	5	.....	.....	0	0	.....	H. Müller.
Leipsic	.....	.....	29.84	757.8	26.2	— 3.2	96	ESE	.....	.....	4	.....	10	.....	.....	Inap	Inap.	Snowing.....	Prof. Bruhns.
Memel	.....	.....	30.35	770.9	20.7	— 6.3	90	ESE	.....	.....	4	.....	10ks	.....	.....	0.[illegible]4	0.1	.....	Reinbrecht & Skalweit.
Münster	.....	.....	29.63	752.5	39.2	4.0	86	NW	.....	.....	3	.....	10	.....	.....	0.457	11.6	.....	Prof. E. Heis.
Neufahrwasser	.....	.....	30.28	769.1	21.6	— 5.8	74	SE	.....	.....	3	.....	10	.....	.....	0.020	0.5	.....	A Lothe.
Posen	.....	.....	30.08	763.9	20.5	— 6.4	90	SE	.....	.....	6	.....	9	.....	.....	0	0	.....	Dr. Magener.
Strassburg, (in Alsace)	.....	.....	29.99	761.8	40.3	4.6	74	W	.....	.....	3	.....	10	NW	.....	0	0	.....	Dr. Schur.
Stuttgart	.....	.....	29.89	759.1	36.0	2.2	82	W	.....	.....	2	.....	10	.....	.....	0.028	0.7	Rain & snow	Prof. Schoder.
Thorn	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Dr. Hasenbalg.
Treves, (Trier)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Prof. Flesch.
Weissenburg, (Bavaria)	28.29	718.5	29.86	758.4	39.2	4.0	72	W	.....	.....	5	.....	10	.....	.....	0.283	7.2	Foggy.....	Dr. von Bebber.
Wustrow, Naval School	.....	.....	29.85	758.1	34.3	1.3	83	W	.....	.....	6	.....	10	W	.....	0.035	0.9	.....	E. F. Schütz.
	.....	.....	30.04	762.9	25.2	— 3.8	94	ESE	.....	.....	4	.....	10	.....	.....	0	0	.....	.....
GERMAN NAVAL SERIES.																			
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—The elevation of Friedrichshafen is 413.4 meters, or 1,356.3 feet; Weissenburg, 431 meters, or 1,414.0 ft. In the originals the distinction between the amount of upper and lower clouds is not made. It is not always certain that the remarks in the weather column refer to the moment of observation.

GREEK SERIES.

Furnished by the cooperation of Professor Dr. J. F. Julius Schmidt, Director of the Royal Observatory at Athens.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Athens			29.79	756.7	45.3	7.4		N										Clear	

Note.—The originals give the barometer corrected, but not reduced to sea-level; occasionally the kind of clouds; the weather as published. They omit the humidity, wind-force, amount of cloudiness and rain-fall.

ITALIAN SERIES.

Furnished by the cooperation of His Excellency the Minister of Agriculture, Industry and Commerce, and the respective Observers.

Udine			29.80	756.8	35.2	1.8	73	Calm	0	0		10				0	0		Prof. Giovanni Clodig
Stelvio	21.76	552.8			11.3	—11.5		SE			4	10				0.067	1.7		Signora Ernesta Manfredi.
Valdobbia	21.74	552.3			13.6	—10.2	80	W			8	8		N		0	0		Ab. Dom. Mongini.
Padua			29.79	756.6	31.8	— 0.1	100	NNE	8.1	3.6		10				0.083	2.1	Snowing	Prof. Dott. Lorenzoni.
Vicenza			29.81	757.2	33.3	0.7	96	NE	0.7	0.3		10				2.56*	65.*		Conte Alm. Da Schio.
Verona			29.80	756.8	36.0	2.2	89	E			1	10				0.102	2.6	Snowing	Dott. B. Bertoncelli.
Bergamo	28.43	722.1	29.80	756.9	32.7	0.4	89	NE			1	9						Snowing	Prof Trionfini Carlo.
Domodossola			29.81	757.2	42.8	6.0	44	N			6	5				0.057	1.4	Snowing	Prof. Giuseppe Calza.
Milan			29.81	757.1	34.7	1.5	96	NE			1	10				0	0		Ab. Gio. Capelli
Pavia			29.80	756.8	34.5	1.4	89	NE			1	10				0.059	1.5		Prof. Gio. Cantoni.
Moncalieri			29.79	756.6	36.0	2.2	66	NNW	1.3	0.6		4		SW		0	0		Prof. P. F. Denza.
Mondovi	27.83	706.5	29.82	757.3	34.0	1.1	81	N			2	9		N		0	0		Prof. D. C. Bruno.
Porto Maurizio			29.68	753.9	51.6	10.9	35	NNE			2	8				0	0		Prof. L. Vassallo.
Genoa			29.68	753.8	40.5	4.7	62	N	10.5	4.7		10		N		0.010	0.4	Light rain	Prof. G. M. Garibaldi.
Piacenza			29.79	756.6	32.5	0.3	94	E	3.8	1.7		10				0.077	1.9		Dott. G. Manzi.
Parma			29.81	757.2	33.8	1.0	90	E			2	10				0.05	1.3		Prof. P. Pigorini.
Florence			29.70	754.3	38.3	3.5	63	E			2	10				0	0		Cav. F. Meucci.
Leghorn			29.64	752.9	40.8	4.9	93	E	9.8	4.4		10		S		0	0		Prof. P. Monte.
Siena	28.48	723.4	29.73	755.2	37.2	2.9	94	ESE	1.8	0.8		10		W		0.10	2.6	Rain & snow	Prof. L. Toscani.
Urbino	28.19	716.0	29.82	757.5	38.1	3.4	73	SSW			2	10				0	0		Prof. P. Serpieri.
Pesaro			29.76	756.0	40.8	4.5	76	S	0	0		10				0	0		Prof. Luigi Guidi.
Ancona			29.78	756.3	44.1	6.7	64	SE			2	10				0	0		Prof. F. De— Bosis.
Grosseto			29.71	754.6	47.7	8.7	70	ESE			4	8		SE		0	0		Avv. P. Ponticelli.
Rome			29.77	756.1	50.0	10.0	57	SSE	12.5	5.6		9				0	0		Prof's. P. Secchi & L. Respighi.
Naples, O. U.			29.82	757.3	52.2	11.2	51	SE			2	10		SW		0	0		Prof. L. Palmieri.
Lecce			29.89	759.1	44.8	7.1	53	NNW	10.5	4.7		2		N		0	0		Prof. C. De—Giorgi.
Cosenza			29.88	759.0	48.6	9.2	72	ENE	0.7	0.3		6				0	0		Prof. F. D. Conti.
Cagliari																			Prof. A. Pacinotti.
Ilposto, (Sicily)			29.82	757.5	55.2	12.9	59	SE			2	2		SE		0	0		Prof. F. Caffero.
Palermo			29.83	757.6	58.8	14.9	54	ESE	2.6	1.1		7				0	0		Prof. G. Cacciatore.
Caltanissetta	27.91	708.8	29.91	759.8	46.9	8.3	78	WSW			4	10		SE		0	0		Prof. A. Pagani.
Siracusa			29.82	757.5	55.9	13.2	63	SE			4	9		W		0	0		Prof. V. Giuliano.
Sub-Series.																			
Naples, S. R.			29.86	758.4	46.4	8.0	51	NW	0	0		9		W		0	0		Prof. F. Brioschi.

Note.—The originals give the wind-force by the scale 0 to 4, or the velocity in kilometers per hour; generally, no distinction between upper and lower clouds occasionally the weather by the Vienna symbols. The elevation of Stelvio is 2,543.0 meters, or 8,342.9 feet; Valdobbia, 2,548.0 meters or 8,359.3 feet; Bergamo, 379.6 meters, or 1,24 3 feet; Mondovi, 556 meters, or 1,824.2 feet: Siena, 348.5 meters, or 1,143.3 feet; Urbino, 451 meters, or 1,479.7 feet; Caltanissetta, 570.3 meters, or 1,871.0 feet. *Unmelted snow.

JAPANESE SERIES.

Furnished by the coöperation of the Imperial University of Tokei, Japan.

Tokei			29.78	756.4	42	5.6		N	4	1.8			10			0.577	14.61		Prof. P. V. Veeder.

Note.—The originals give the amount of cloudiness by the scale 0 to 4 without distinguishing between upper and lower clouds. The rain-fall is measured at 7 a. m., local time

MEXICAN SERIES.

By authority of the Secretary of Public Works.

Furnished by the coöperation of Senor Mariano Barcena, Director of the Central Meteorological Observatory in the City of Mexico.

Mexico																			Mariano Barcena. Vicente Reyes. Miguel Perez. (Engineers in charge.)

Note.—The elevation of Mexico is 2,290 meters, or 7,512.9 feet. The rain-fall is measured at 6 a. m., local time.

NETHERLANDS' SERIES.

Furnished by the cooperation of Professor Buys Ballot, Director of the Royal Meteorological Institute of the Netherlands at Utrecht.

Flushing			29.96	761.0	42.4	5.8		NW			5					0.201	5.1		
Groningen			29.69	754.0	30.6	— 0.8		N								0.657	16.7		
Heider			29.78	756.3	41.2	5.1		NNW			6					0.055	1.4		
Utrecht			29.75	755.6	43.5	6.4	76	NW			6		8			0.27	6.9	Very cloudy	

Note.—The originals give the wind-pressure in kilograms per square meter; for Utrecht, they give the weather as published, from which the amount of cloudiness is taken by the scale 0 to 4, without distinguishing between upper and lower clouds. It is assumed that the barometer readings have been reduced to sea-level.

NORWEGIAN SERIES.

Furnished by the cooperation of Professor H. Mohn, Director of the Royal Norwegian Meteorological Institute at Christiania.

Bergen			30.02	762.4	32.5	0.3	89	S	20.8	9.3		10						Snowing	
Brönö			29.82	757.5	33.4	0.8	68	S	33.6	15		9							
Christiania			30.21	767.3	25.8	— 1.8	74	SE	0	0		10				0	0		
Tromsö			29.61	752.2	33.4	0.8	47	SSE	26.8	12		10				0	0		

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols. The loudiness and weather at Bergen refer to 2h., p. m., local time, instead of 1h., 4 ...

PORTUGUESE SERIES.

Furnished by the coöperation of J. C. de Brito Capello, Director of the Meteorological Observatory of the Infante Don Luiz at Lisbon.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Upper. 0—10.	Clouds. Amount. Low'r. 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Angra, (Azores)	.....	.....	30.45	773.3	59.7	15.4	83	W	6.9	3.1	.....	.....	6	.....	.....	0	0	.....	Dr. J. A. Sampaio.
Campo Mujor	.....	.....	30.29	769.3	57.2	14.0	63	WNW	6.8	3.06	.....	.....	5	NW	.....	0	0	.....	Dr. A. M. R. dos Santos.
Funchal, (Madeira)	.....	.....	30.38	771.7	68.2	20.1	58	ESE	2.2	0.98	.....	.....	0	.....	.....	0	0	.....	Capt. D. A. de Cunha.
Lisbon	.....	.....	30.37	771.3	59.0	15.0	75	NNW	16.1	7.2	.....	.....	6	N	.....	0	0	.....	The Observatory.
Ponta Delgada, (Azores)	.....	.....	30.48	774.2	62.6	17.0	67	SW	0	0	.....	.....	6	.....	.....	0	0	.....	.....

Note.—The originals give the wind-velocity in kilometers per hour; occasionally, the weather by the Vienna symbols; the amount of cloudiness without distinguishing between upper and lower clouds; the barometer corrected but not reduced to sea-level. The rain-fall at Lisbon is measured at noon, instead of 0 h. 6 m., p. m.

RUSSIAN SERIES.

Furnished by the cooperation of Professor H. Wild, Director of the Imperial Central Physical Observatory of Russia, at St. Petersburg.

Warsaw	.....	.....	30.19	766.8	15.4	— 9.2	84	E	20	9	.....	.....	10	.....	.....	.....	.....	Snowing	Astronomical Obs.
Wilna	.....	.....	30.41	772.4	20.3	— 6.5	63	SE	2	1	.....	.....	10	.....	.....	.....	.....	.....	Astronomical Obs.
Dorpat	.....	.....	30.55	775.9	19.0	— 6.9	77	S	9	4	.....	.....	10	.....	.....	.....	.....	Light snow.	Physical Cabinet.
St. Petersburg	.....	.....	30.59	777.0	22.0	— 5.2	80	S	7	3	.....	.....	10	.....	.....	.....	.....	.....	Central Physical Obs.
Knopio	.....	.....	30.45	773.4	20.7	— 6.3	.....	SW	13	6	.....	.....	10	.....	.....	.....	.....	.....	Ch. Forsten.
Kieff	.....	.....	30.35	771.0	14.9	— 9.5	97	NNE	9	4	.....	.....	10	.....	.....	.....	.....	Light snow.	Physical Cabinet.
Nikolaiev	.....	.....	30.17	766.4	14.9	— 9.5	62	NE	22	10	.....	.....	0	.....	.....	.....	.....	.....	Kurdakof
Kertch	.....	.....	30.00	762.0	22.8	— 5.1	96	NNE	11	5	.....	.....	10	.....	.....	.....	.....	.....	Lagorio.
Moscow	.....	.....	30.56	776.2	15.8	— 9.0	88	NW	7	3	.....	.....	10	.....	.....	.....	.....	Light snow.	Meteorological Obs.
Lugan	.....	.....	30.14	765.5	16.7	— 8.5	79	NE	13	6	.....	.....	10	.....	.....	Blank	Blank	.....	Meteorological Obs.
Archangel	.....	.....	30.39	771.9	11.8	—11.2	100	SSW	13	6	.....	.....	10	.....	.....	.....	.....	.....	Ogorodnikof.
Tiflis	28.35	720.2	29.81	757.1	38.3	3.5	83	SW	4	2	.....	.....	10	.....	.....	.....	.....	.....	Physical Observatory.
Astrakhan	.....	.....	30.02	762.4	15.1	— 9.4	72	NE	9	4	.....	.....	10	.....	.....	.....	.....	.....	Sebastianof.
Kasan	.....	.....	30.45	773.3	— 3.6	—19.8	90	NNE	9	4	.....	.....	0	.....	.....	.....	.....	.....	Physical Cabinet.
Orenburg	.....	.....	30.34	770.7	—22.9	—30.5	.....	E	18	8	.....	.....	0	.....	.....	.....	.....	.....	Tschernischef.
Ekaterinburg	29.26	743.3	30.37	771.4	—19.5	—28.6	71	N	9	4	.....	.....	3	.....	.....	.....	.....	.....	Meteorogical Obs.
Nukuss	.....	.....	29.98	761.6	27.0	— 2.8	92	NE	9	4	.....	.....	10	.....	.....	.....	.....	.....	.....
Kasaly	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Bobrof.
Tashkend	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Michelson.
Barnaul	.....	.....	30.17	766.4	— 5.3	—20.7	65	SW	4	2	.....	.....	0	.....	.....	.....	.....	.....	Meteorological Obs.
Yeniseisk	.....	.....	29.89	759.2	9.1	—12.7	73	SW	7	3	.....	.....	10	.....	.....	.....	.....	Snowing	Marks.
Irkutsk	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Usolzef.
Peking, (China)	.....	.....	30.58	776.7	18.9	— 7.3	58	Calm	0	0	.....	.....	0	.....	.....	.....	.....	.....	Physical Observatory.
Nertchinsk	28.19	716.0	30.69	779.4	—33 0	—36.1	92	Calm	0	0	.....	.....	0	.....	.....	.....	.....	.....	Meteorological Obs.
Vladivostock	.....	.....	30.11	764 7	3.6	—15 8	71	NW	13	6	.....	.....	0	.....	.....	.....	.....	.....	
Nikolaievsk, on the Amoor	.....	.....	.....	.....	4.1	—15.5	.....	W	2	1	.....	.....	10	.....	.....	.....	.....	Snowing	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols; they omit the rain-fall. The elevation of Tiflis is 409 meters, or 1,341.8 feet; Ekaterinburg, 306.4? m., or 1,005.2? ft.; Tashkend, 494.2? m., or 1,621.3? ft.; Irkutsk, 392 m., or 1,286 ft.; Nertchinsk, 592.0? m., or 1,942.2? ft.

SPANISH SERIES.

Furnished by the coöperation of Antonio Aguilar, Director of the Royal Observatory at Madrid, and of Don Cecilio Pujazon, Captain R. N. Director of the Naval Observatory at San Fernando.

Madrid	.....	.....	30.27	768.8	51.0	12.2	60	N	2.2	1.00	.....	1	0	N	.....	0.008	0.2	Light clouds	Royal Observatory.
San Fernando	.....	.....	30.31	769.8	57.6	14.2	75	WSW	4.9	2.2	.....	2	5	S	W	.....	.....	.....	Naval Observatory.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Note.—The originals give the weather in general terms, as published; rain-fall for San Fernando from preceding to following midnight; wind-velocity for Madrid in kilometers per hour.

SWEDISH SERIES.

Furnished by the coöperation of Professor R. Rubenson, Director of the Royal Swedish Meteorological Institute, at Stockholm, and of Dr. H. H. Hildebrandsson, Chief of the Meteorological Division of the Upsala Observatory.

Haparanda	.....	.....	29.93	760.1	24.4	— 4.2	95	S	.....	.....	6	.....	10	.....	.....	0	0	.....	
Umea	.....	.....	30.32	770.0	23.9	— 5.0	95	SE	.....	.....	7	.....	10	.....	.....	.....	.....	Snowing	
Hernosand	.....	.....	30.29	769.4	27.7	— 2.4	81	SW	.....	.....	4	.....	9	.....	.....	0	0	.....	
Stockholm	.....	.....	30.32	770.0	27.3	— 2.6	92	SSE	.....	.....	4	.....	10	.....	.....	0	0	.....	
Wisby	.....	.....	30.34	770.5	28.2	— 2.2	87	SW	.....	.....	6	.....	10	.....	.....	0	0	.....	
Sub-Series.																			
Upsala	.....	.....	30.33	770.3	26.8	— 2.9	78	SSE	14.1	6.3	.....	.....	10	.....	.....	0	0	.....	Dr. Hildebrandsson.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Note.—The originals give the wind-force by the scale 0 to 6, and Upsala also velocity in meters per second; occasionally, the weather by the Vienna symbols, or in general terms; no distinction between the amount of upper and lower clouds. The rain-fall is measured at 8 a. m., local time.

SWISS SERIES.

Furnished by the coöperation of Professor R. Wolf, Director of the Observatory at Zurich, and of Professor E. Plantamour, Director of the Observatory at Geneva.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Geneva	28.62	726.9	30.11	764.9	32.2	0.1	100	NW	.....	.....	5	.....	10	.....	.....	0.134	3.4	Snowing.....	The Observatory.
Zurich	28.33	719.5	30.04	763.1	32.0	0.0	94	NW	.....	.....	2	.....	8	.....	.....	0.102	2.6	Snowing.....	The Observatory.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—For Geneva the corresponding departures from the normal values are: Barometer, —0.4 mm; Thermometer, —1.8 cent.; Relative Humidity, +23 per cent.

NOTE.—The rain-fall is measured at Zurich at 7 a. m. on the following day. The originals give the barometer corrected but not reduced to sea-level; the wind-force by the scale 0 to 4 for Zurich; the amount of cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The elevation of Geneva is 408 meters, or 1,339 feet, and that of Zurich 470 meters, or 1,542 feet.

TURKISH SERIES.

Furnished by the coöperation of A. Coumbary, Effendi, Director of the Central Observatory at Constantinople, and of Professor C. V. A. Van Dyck, Superintendent of the Lee Observatory at Beirut.

Constantinople	.....	.....	29.71	754.5	43.3	6.3	94	NE	27	12.0	.....	.....	10	.....	NE	0.47?	12.0	.....	
Fao, (Persian Gulf)	.....	.....	29.97	761.2	66.0	18.9	.....	NW	.....	.....	3	.....	10	.....	.....	.....	.....	.....	
Salonica	.....	.....	29.80	756.9	49.6	9.8	.....	N	.....	.....	4	.....	10	.....	.....	.....	.....	.....	
Valona	.....	.....	29.72	754.8	42.6	5.9	.....	NW	.....	.....	1	.....	0	.....	.....	.....	.....	.....	
Varna	.....	.....	29.88	759.0	15.8	— 9.0	.....	N	.....	.....	10	.....	10	.....	.....	.....	.....	.....	
SUB-SERIES.																			
Beirut, (Syria,) Lee Obs'y	.....	.....	29.70	754.3	54.0	12.2	87	SW	.....	.....	5	.....	10n	.....	SW	0.68	17.3	Raining.....	Prof. C. V. A. Van Dyck

NOTE.—The originals give the wind-force by the scale 0 to 7, (except Beirut, by the scale 0 to 12, and Constantinople velocity in meters per second;) the weather in general terms as published; no distinction between upper and lower clouds, and, except Constantinople and Beirut, the amount by the scale 0 to 4. It is assumed that the barometer is reduced to sea-level.

CANADIAN SERIES.

Furnished by the coöperation of Professor G. T. Kingston, Director of the Magnetic Observatory at Toronto, and Superintendent of the Meteorological Office of the Dominion of Canada, and the respective Observers. Those marked with a star (*) are also telegraphed daily to the office of the Chief Signal Officer, U. S. Army.

Bathurst, N. B	.....	.....	30.11	764.8	—13.5	—25.3	73	SW	5	2.2	.....	.....	0	.....	.....	.....	.....	.....	Hon. J. Ferguson.
Brockville, Ontario	.....	.....	30.20	767.1	11	—11.7	.....	Calm	0	0	.....	.....	10s	.....	SW	0.10	2.5	Cloudy.....	W. R. Bigg.
*Chatham, N. B	.....	.....	30.17	766.3	—23	—30.6	100	SW	1	0.4	.....	0	0	.....	.....	0	0	Clear	G. A. Blair.
Charlottetown, P. E. Island	.....	.....	30.14	765.5	—12	—24.4	90	W	8	3.6	.....	0	0	.....	.....	0	0	Clear.....	H. J. Cundall, C. E.
Cornwall, Ontario	.....	.....	30.21	767.3	0.5	—17.5	100	NW	.....	.....	1	.....	10s	.....	.....	0.03	0.8	Dull	James Smith, M. A.
Dalhousie, N. B	.....	.....	30.12	765.0	.....	.....	.....	W	.....	.....	1	.....	.....	.....	.....	0	0	Clear.....	H. A. Johnson.
Esquimault, B. C	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	W. H. Revis.
Fredericton, N. B	.....	.....	30.30	769.6	—27.2	—32.9	100	Calm	0	0	.....	0	0	.....	.....	0	0	Clear.....	Prof. Harrison.
*Fort Garry, Manitoba	.....	.....	29.81	757.2	10	—12.2	92	SW	8	3.6	.....	2c	Haze	W	W	0	0	Fair.....	James Stewart.
Goderich, Ontario	.....	.....	30.18	766.6	16.2	— 8.8	82	SW	.....	.....	2	0	2s	.....	.....	0	0	Fair.....	H. J. Strang, M. A.
Granton, Ontario	28.97	735.8	30.17	766.3	14.4	— 9.8	.....	SW	.....	.....	1	1cs	0	.....	.....	0	0	Clear	James Grant.
*Halifax, N. S	.....	.....	30.23	767.8	—10	—23.3	77	W	4	1.8	.....	0	0	.....	.....	0	0	Clear.....	F. Allison, M. A.
Hamilton, Ontario	.....	.....	30.18	766.6	21.0	— 6.1	90	W	.....	.....	1	10cs	0	.....	.....	0	0	Cloudy	G. Dickson.
Heart's Content, N. F	.....	.....	29.82	757.4	7	—13.9	100	W	.....	.....	5	0	0	.....	.....	0.09	2.3	Fine.....	E. Weedon.
*Kingston, Ontario	.....	.....	30.24	768.1	15	— 9.4	85	Calm	0	0	.....	.....	10s	.....	.....	0.01	0.3	Cloudy.....	S. Woods, M. A.
*Montreal, Quebec	.....	.....	30.22	767.6	1	—17.2	85	S	16	7.2	.....	.....	10n	.....	S	0.02	0.5	Cloudy	C. H. McLeod, C. E.
*Ottawa, Ontario	.....	.....	30.19	766.8	— 4	—20.0	90	E	2	0.9	.....	.....	10n	.....	E	0	0	Cloudy.....	J. B. Haney.
*Parry Sound, Ontario	.....	.....	30.06	763.5	17	— 8.3	83	S	12	5.4	.....	2k	8ks	S	S	0.10	2.5	Cloudy.....	Rev. R. Mosley.
Port Dover, Ontario	.....	.....	30.19	766.8	22	— 5.6	84	SW	7	3.1	.....	10k	0	W	.....	0	0	Cloudy.....	H. Morgan.
Port Hastings, N. S	.....	.....	30.14	765.5	— 8.5	—22.5	.....	NW	6	2.7	.....	.....	.....	.....	.....	0	0	Fine.....	Peter Grant.
Port Stanley, Ontario	.....	.....	30.20	767.1	19	— 7.2	84	W	12	5.4	.....	0	0	.....	.....	0	0	Clear	M. Payne.
*Quebec, Quebec	.....	.....	30.23	767.8	— 5	—20.6	63	W	1	0.4	.....	.....	10n	.....	.....	0	0	Cloudy	Capt. Ashe, R. N.
*Rockliffe, Ontario	.....	.....	30.13	765.3	— 1	—18.3	94	E	2	0.9	.....	.....	10s	.....	NW	Inap.	Inap.	Light snow..	
St. John, N. B	.....	.....	30.32	770.1	10	—12.2	100	NW	1	0.4	.....	0	0	.....	.....	0	0	Clear	G. Murdoch, C. E.
*Saugeen, Ontario	.....	.....	30.07	763.8	17	— 8.3	83	SW	4	1.8	.....	2cs	0	.....	.....	0.25	6.3	Clear	K. Stewart.
Stayner, Ontario	.....	.....	30.07	763.8	19	— 7.2	86	W	6	2.7	.....	.....	10n	.....	W	0	0	Cloudy.....	R. J. Cole.
Stratford, Ontario	28 77	730.7	30.16	766.1	12.1	—11.1	90	SW	6	2.7	.....	0	2s	.....	.....	0	0	Fine.....	C. J. MacGregor, M. A.
*Sydney, C. B	.....	.....	30.11	764.8	— 6	—21.1	100	SW	10	4.5	.....	0	2s	.....	.....	0.02	0.5	Clear.....	T. C. Hill.
*Toronto, Ontario	.....	.....	30.15	765.8	19	— 7.2	83	W	5	2.2	.....	.....	10ks	.....	W	0	0	Cloudy.....	Magnetic Observatory.
Woodstock, Ontario	.....	.....	30.16	766.1	17.8	— 7.9	97	W	9	4.0	.....	.....	8s	.....	W	0	0	Cloudy.....	J. Montgomery.
SUB-SERIES.																			
St. Johns, Newfoundland	.....	.....	29.90	759.4	14.0	—10.0	82	SW	.....	.....	.....	10k	10s	.....	.....	0.30	7.6	Fair	John Delany.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—The originals for Brockville, Charlottetown, Port Dover, Port Stanley, Stayner, St. Johns, N. F. and those telegraphed, give the amount of cloudiness by the scale 0 to 4. The elevation of Granton is 1,015 feet, or 309.4 m.; Stratford, 1,157 feet, or 352.3 m.

UNITED STATES SERIES.

Furnished by the coöperation of Bvt. Brig. Gen. Albert J. Myer, Chief Signal Officer, U. S. Army.

STATIONS.	Barometer: Corrected for instrum'tal error and temperature. Inches.	Barometer: Corrected for instrum'tal error and temperature. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather	Observer.
Albany, N. Y.	.....	.....	30.32	770.1	15	— 9.4	83	Calm	0	0	.....	.....	10s	.....	.....	Inap.	Inap.	Cloudy	
Alpena, Mich.	.....	.....	30.02	762.5	19	— 7.2	69	SW	6	2.7	.....	.....	10s	.....	SW	0	0	Cloudy	
Atlantic City, N. J.	.....	.....	30.40	772.1	22	— 5.6	72	W	3	1.3	.....	1c	0	W	.....	0	0	Clear	
Augusta, Ga.	.....	.....	30.47	773.9	36	2.2	85	Calm	0	0	.....	.....	10s	.....	.....	0	0	Cloudy	
Baltimore, Md.	.....	.....	30.38	771.6	21	— 6.1	71	Calm	0	0	.....	Haze	Sm'e	.....	.....	0	0	Smoky	
Barnegat, N. J.	.....	.....	30.38	771.6	19	— 7.2	69	NW	4	1.8	.....	2c	2ck	NW	NW	0	0	Fair	
Bismarck, Dakota	28.20	716.3	29.96	761.0	15	— 9.4	82	NW	2	0.9	.....	0	0	.....	.....	0	0	Clear	
Boston, Mass.	.....	.....	30.32	770.1	16	— 8.9	83	SW	2	0.9	.....	2cs	Haze	W	.....	0	0	Hazy	
Breckenridge, Minn.	.....	.....	30.03	762.7	10	—12.2	68	SW	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Buffalo, N. Y.	.....	.....	30.16	765.8	21	— 6.1	71	SW	8	3.6	.....	2c	8s	.....	SW	Inap.	Inap.	Cloudy	
Burlington, Vt.	.....	.....	30.27	768.8	5	—15.0	75	SE	1	0.4	.....	.....	10s	.....	.....	0.01	0.3	Cloudy	
Cairo, Ill.	.....	.....	30.47	773.9	33	0.6	69	S	2	0.9	.....	.....	10s	.....	.....	0	0	Cloudy	
Cape Hatteras, N. C.	.....	.....	30.39	771.9	33	0.6	69	W	3	1.3	.....	0	Haze	.....	.....	0	0	Clear	
Cape Henry, Va.	.....	.....	30.43	772.9	32	0.0	59	SW	8	3.6	.....	0	0	.....	.....	0	0	Clear	
Cape Lookout, N. C.	.....	.....	30.47	773.9	34	1.1	79	N	5	2.2	.....	0	0	.....	.....	0	0	Clear	
Cape May, N. J.	.....	.....	30.39	771.9	28	— 2.2	77	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Charleston, S. C.	.....	.....	30.45	773.4	47	8.3	62	N	3	1.3	.....	8cs	2s	W	W	0	0	Cloudy	
Cheyenne, Wyoming	24.14	613.1	30.08	764.0	25	— 3.9	60	NW	16	7.2	.....	0	0	.....	.....	0	0	Clear	
Chicago, Ill.	.....	.....	30.20	767.1	21	— 6.1	71	SW	8	3.6	.....	0	0	.....	.....	0	0	Clear	
Cincinnati, Ohio	.....	.....	30.31	769.9	29	— 1.7	78	SW	6	2.7	.....	0	0	.....	.....	0	0	Clear	
Cleveland, Ohio	.....	.....	30.24	768.1	25.5	— 3.6	75	S	20	8.9	.....	1c	8s	W	SW	0	0	Fair	
Corsicana, Tex.	.....	.....	30.41	772.4	39	2.2	80	SE	3	1.3	.....	2cs	0	.....	.....	Inap	Inap.	Clear	
Davenport, Iowa	.....	.....	30.30	769.6	11	—11.7	79	SW	1	0.4	.....	0	0	.....	.....	0	0	Clear	
Denison, Tex.	.....	.....	30.46	773.7	31	— 0.6	89	SE	2	0.9	.....	.....	Fog	.....	.....	0.17	4.3	Foggy	
Denver, Col.	24.94	633.5	30.16	766.1	19	— 7.2	64	S	5	2.2	.....	0	0	.....	.....	0	0	Clear	
Detroit, Mich.	.....	.....	30.19	766.8	15	— 9.4	65	SW	5	2.2	.....	1cs	0	.....	.....	0	0	Clear	
Dodge City, Kan.	27.68	703.1	30.21	767.3	12	—11.1	61	W	13	5.8	.....	0	0	.....	.....	0	0	Clear	
Dubuque, Iowa	.....	.....	30.25	768.3	8	—13.3	78	Calm	0	0	.....	0	Haze	.....	.....	0	0	Clear	
Duluth, Minn.	.....	.....	29.95	760.7	17	— 8.3	67	W	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Eastport, Me.	.....	.....	30.28	769.1	— 3	—19.4	50	W	6	2.7	.....	0	0	.....	.....	0	0	Clear	
Erie, Pa.	.....	.....	30.19	766.8	25	— 3.9	88	S	20	8.9	.....	.....	10s	.....	W	0	0	Cloudy	
Escanaba, Mich.	.....	.....	29.94	760.5	18	— 7.8	76	SW	4	1.8	.....	.....	8s	.....	NW	0	0	Cloudy	
Fort Gibson, Indian Ter.	.....	.....	30.36	771.1	35	1.7	90	SW	7	3.1	.....	.....	10s	.....	SW	Inap.	Inap.	Cloudy	
Ft. St. Michael, Alaska	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Fort Sill, Indian Ter.	29.16	740.7	30.34	770.6	34	1.1	45	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Fort Sully, Dakota	28.42	721.9	30.20	767.1	21	— 6.1	71	NW	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Florence, Arizona	28.54	724.9	30.07	763.8	56	13.3	.....	NE	.....	.....	.....	0	0	.....	.....	0	0	Clear	
Galveston, Tex.	.....	.....	30.42	772.7	49	9.4	85	E	8	3.6	.....	.....	10s	.....	.....	0	0	Cloudy	
Grand Haven, Mich.	.....	.....	30.12	765.0	32	0.0	79	SW	12	5.4	.....	0	0	.....	.....	0	0	Clear	
Indianapolis, Ind.	.....	.....	30.32	770.1	27	— 2.8	77	SW	4	1.8	.....	0	Sm'e	.....	.....	0	0	Clear	
Indianola, Tex.	.....	.....	30.40	772.1	51	10.6	100	E	7	3.1	.....	.....	10n	.....	.....	Inap.	Inap	Light rain	
Jacksonville, Fla.	.....	.....	30.40	772.1	45	7.2	85	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Keokuk, Iowa	.....	.....	30.29	769.4	19	— 7.2	84	W	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Key West, Fla.	.....	.....	30.25	768.3	65	18.3	83	NE	12	5.4	.....	0	0	.....	.....	0	0	Clear	
Kittyhawk, N. C.	.....	.....	30.46	773.7	33	0.6	79	SW	5	2.2	.....	0	0	.....	.....	0	0	Clear	
Knoxville, Tenn.	.....	.....	30.52	775.2	23	— 5.0	71	N	1	0.4	.....	0	0	.....	.....	0	0	Clear	
La Crosse, Wis.	.....	.....	30.18	766.6	10	—12.2	69	S	9	4.0	.....	0	0	.....	.....	0	0	Clear	
Leavenworth, Kan.	.....	.....	30.34	770.6	11	—11.7	89	W	1	0.4	.....	.....	Fog	.....	.....	0	0	Foggy	
Louisville, Ky.	.....	.....	30.39	771.9	28	— 2.2	77	S	7	3.1	.....	0	Haze	.....	.....	0	0	Clear	
Lynchburg, Va.	.....	.....	30.43	772.9	25	— 3.9	75	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Malone, N. Y.	.....	.....	30.21	767.3	12	—11.1	80	S	6	2.7	.....	.....	10s	.....	.....	0.07	1.8	Cloudy	
Marquette, Mich.	.....	.....	29.85	758.2	26	— 3.3	64	W	6	2.7	.....	0	0	.....	.....	0	0	Clear	
Memphis, Tenn.	.....	.....	30.37	771.4	38	3.3	63	SW	4	1.8	.....	.....	10s	.....	.....	0	0	Clear	
Milwaukee, Wis.	.....	.....	30.18	766.6	14	—10.0	81	W	4	1.8	.....	0	0	.....	.....	0	0	Cloudy	
Mobile, Ala.	.....	.....	30.48	774.2	43	6.1	75	N	2	0.9	.....	5c	8s	.....	.....	0	0	Cloudy	
Montgomery, Ala.	.....	.....	30.48	774.2	42	5.6	69	NE	2	0.9	.....	10cs	Sm'e	.....	.....	0	0	Clear	
Morgantown, W. Va.	29.24	742.7	30.37	771.4	24	— 4.4	68	S	2	0.9	.....	0	0	.....	.....	0	0	Foggy	
Mt. Washington, N. H.	23.33	592.6	29.69	754.1	—15	—26.1	100	NW	40	17.9	.....	.....	Fog	.....	.....	0	0	Clear	
Nashville, Tenn.	.....	.....	30.45	773.4	27	— 2.8	88	Calm	0	0	.....	0	Fog	.....	.....	0	0	Cloudy	
New Haven, Conn.	.....	.....	30.35	770.9	23	— 5.0	48	Calm	0	0	.....	8ck	Fog	W	.....	0	0	Fair	
New London, Conn.	.....	.....	30.35	770.9	18	— 7.8	68	W	5	2.2	.....	5ck	0	NW	.....	0	0	Clear	
New Orleans, La.	.....	.....	30.43	772.9	46	7.8	61	NE	4	1.8	.....	.....	10s	.....	W	Inap.	Inap	Cloudy	
Newport, R. I.	.....	.....	30.35	770.9	21	— 6.1	60	W	11	4.9	.....	1c	0	W	.....	0	0	Clear	
New York, N. Y.	.....	.....	30.38	771.6	20	— 6.7	70	W	7	3.1	.....	10k	Sm'e	.....	.....	0	0	Cloudy	
Norfolk, Va.	.....	.....	30.42	772.7	32	0.0	69	SW	3	1.3	.....	0	0	.....	.....	0	0	Clear	
North Platte, Neb.	27.26	692.4	30.10	764.5	7	—13.9	88	W	10	4.5	.....	0	0	.....	.....	0	0	Clear	
Omaha, Neb.	29.09	738.9	30.28	769.1	13	—10.6	81	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Oswego, N. Y.	.....	.....	30.22	767.6	24.5	— 4.2	72	S	1	0.4	.....	.....	10s	.....	.....	0.47	11.9	Cloudy	
Pembina, Dakota	.....	.....	29.82	757.4	5	—15.0	88	W	6	2.7	.....	0	0	.....	.....	0	0	Clear	
Philadelphia, Pa.	.....	.....	30.40	772.1	23	— 5.0	60	W	4	1.8	.....	2c	Fog	W	.....	0	0	Fair	
Pike's Peak, Col.	17.76	451.1	29.97	761.2	6	- 14.4	52	N	21	9.4	.....	0	0	.....	.....	0	0	Clear	
Pittsburgh, Pa.	.....	.....	30.30	769.6	25	— 3.5	75	SW	12	5.4	.....	0	0	.....	.....	0	0	Clear	
Port Huron, Mich.	.....	.....	30.16	766.1	13	—10.6	81	S	8	3.6	.....	Haze	0	.....	.....	0	0	Hazy	
Portland, Me.	.....	.....	30.31	769.9	— 4	—20.0	64	N	3	1.3	.....	1c	Haze	.....	.....	Inap.	Inap.	Fair	
Portland, Oregon	.....	.....	30.00	762.0	38	3.3	64	S	3	1.3	.....	0	8s	.....	.....	0	0	Fair	
Punta Rassa, Fla.	.....	.....	30.33	770.4	58.0	14.4	87	NE	6	2.7	.....	5c	0	SW	.....	0.04	1.0	Fair	
Rochester, N. Y.	.....	.....	30.17	766.3	19	— 7.2	69	SW	5	2.2	.....	2cs	8s	W	W	0	0	Clear	
Salt Lake City, Utah	25.98	659.9	30.31	769.9	11	—11.7	79	SE	4	1.8	.....	0	0	.....	.....	0	0	Cloudy	
Sandy Hook, N. J.	.....	.....	30.34	770.6	28	— 5.0	73	W	8	3.6	.....	10ck	0	SW	.....	0	0	Clear	
San Diego, Cal.	.....	.....	30.17	766.3	51	10.6	71	Calm	0	0	.....	0	0	.....	.....	0	0	Fair	
San Francisco, Cal.	.....	.....	30.13	765.3	50	10.0	89	Calm	0	0	.....	5c	Fog	.....	.....	0	0	Clear	
Santa Fé, N. M.	23.43	595.1	29.97	761.2	26	— 3.3	64	NE	4	1.8	.....	0	0	.....	SW	0	0	Fair	
Savannah, Ga.	.....	.....	30.46	773.7	46	7.8	69	NE	3	1.3	.....	0	8s	.....	.....	0.10	2.5	Cloudy	
Shreveport, La.	.....	.....	30.49	774.4	40	4.4	91	Calm	0	0	.....	.....	10s	.....	.....	0	0	Clear	
Smithville, N. C.	.....	.....	30.48	774.2	34	1.1	79	NW	4	1.8	.....	0	0	.....	SW	0	0	Cloudy	
Springfield, Mass.	.....	.....	30.34	770.6	15	— 9.4	63	S	2	0.9	.....	.....	10ks	.....	.....	0	0	Clear	
St. Louis, Mo.	.....	.....	30.34	770.6	33	0.6	61	SW	8	3.6	.....	0	0	.....	.....	0	0	Fair	
St. Marks, Fla.	.....	.....	30.42	772.7	40	4.4	95	N	1	0.4	.....	5cs	2ks	W	W	0	0	Clear	
St. Paul, Minn.	.....	.....	30.03	762.7	12	—11.1	80	SW	1	0.4	.....	0	0	.....	.....	0	0	Clear	
St. Paul's Island, Alaska	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Thatcher's Island, Mass.	.....	.....	30.32	770.1	15	— 9.4	47	W	8	3.6	.....	1k	0	W	.....	0	0	Clear	
Toledo, Ohio	.....	.....	30.21	767.3	26	— 3.3	76	SW	9	4.0	.....	Haze	Haze	.....	.....	0	0	Hazy	
Tucson, Arizona	27.69	703.3	30.24	768.1	28	— 2.2	.....	S	.....	.....	.....	2c	0	SW	.....	0	0	Clear	
Tybee Island, Ga.	.....	.....	30.44	773.2	48	8.9	77	E	12	5.4	.....	5ck	5ks	W	SE	0	0	Cloudy	
Vicksburg, Miss.	.....	.....	30.50	774.7	39.8	4.3	76	Calm	0	0	.....	.....	10s.sm	.....	SE	0.06	1.5	Cloudy	
Virginia City, M. T.	24.45	621.9	29.93	760.2	15	— 9.4	74	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Washington, D. C.	.....	.....	30.41	772.4	15.6	— 9.2	75	Calm	0	0	.....	0	Sm'e	.....	.....	0	0	Smoky	
Wilmington, N. C.	.....	.....	30.48	774.2	33	0.6	79	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	

UNITED STATES SERIES.—CONTINUED.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Wood's Holl, Mass.	.....	.....	30.37	771.4	22	— 5.6	72	NW	5	2.2	.....	0	0	.....	.....	0	0	Clear	
Yankton, Dakota	28.88	733.5	30.30	769.6	8	—13.3	66	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Yuma, Arizona	.....	.....	30.20	767.1	49	9.4	.....	NW	.....	.....	.....	0	2s	.....	N	0	0	Fair	
Sub-Series.																			
Kingston, Jamaica, W. I.	.....	.....	30.27	768.8	76	24.4	78	Calm	0	0	.....	2c	2s	.....	.....	0	0	.....	James Gall.
Navassa, W. I.	.....	.....	.....	.....	78	25.6	.....	NE	.....	.....	3	.....	.....	.....	.....	0	0	Clear	F. M. Everett.
Clifton, Ja., W. I.	27.29	693.2	30.10	764.5	64	17.8	94	NE	1.0	0.4	.....	5c	2k	NE	.....	0.50	12.7	Dull	C. Partridge.
Paramaribo, D. Guiana, S.A.	.....	.....	30.03	762.7	81	27.2	83	E	.....	.....	3	3c	6ks	E	.....	0.05	1.27	½ cloudy	C. J. Hering.
Batavia, Dutch Guiana, S.A.	30.10	764.4	.....	.....	77.0	25.0	.....	NE	.....	.....	.....	.....	.....	.....	.....	0.55	14.00	Cloudy	Dr. H. Groot.
Medellin, Colombia, S. A.	25.24	641 1	.....	.....	66 5	19.2	82	Calm	.....	.....	0	6k	4ks	.....	.....	Inap.	Inap.	Cloudy	Thomas Herran.
York Factory, B. A.	.....	.....	29.97	761.2	—12.0	—24.4	75	W	0	0	.....	2c	0	S	.....	0	0	Fair	J. Fortescue, W. Wood
Honolulu, Oahu, H. I.	.....	.....	30.08	764.0	71	21.7	95	E	.....	.....	1	.....	.....	.....	.....	0	0	Clear	Daniel Smith.
Makawao, Maui, H. I.	.....	.....	29.96	761.0	65	18.3	78	Calm	.....	.....	0	0	8n	.....	.....	0.30	7.6	.....	F. L. Clarke.

NOTE.—The originals give the amount of cloudiness by the scale 0 to 4, except York Factory, Makawao, Medellin and Paramaribo. The elevation of the barometer at Bismarck is 1,677 feet, or 511.1 meters; Cheyenne, 6,057.3 ft., or 1,846.2 m.; Clifton, about 2,892 ft. or 881.5 m.; Denver, 5,195 ft., or 1,585.2 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Fort Sill, 1,100 (?) ft.. or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Florence, 1,550 (?) ft. or 472.5 (?) m.; Makawao, 2,205 ft., or 672.1 m.; Morgantown, 1,027.9 ft., or 313.3 m.; Medellin, 4,876 ft., or 1,486.2 m.; Mt. Washington, 6,285 ft., or 1,915.6 m.; North Platte, 2,846 ft.. or 867.4 m.; Omaha, 1,054.6 ft., or 321.4 m.; Pike's Peak, 14,150.7 ft., or 4,313.1 m.; Salt Lake City, 4,362.2 ft., or 1,329.6 m.; Santa Fé, 6,862.2 (?) ft., or 2,091.6 (?) m.; Tucson, 2,513 (?) ft., or 772.1 (?) m.; Virginia City, 5,480 (?) ft., or 1,670.3 (?) m.; Yankton, 1,278 ft., or 389.5 m. The following constants are added in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Denver, 5.22 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fé, 6.54 in.; Tucson, 2.59 in.; Virginia City, 5.48 in. The elevation of Batavia is about 6 feet; the barometric readings need the addition of 0.2 mm. or 0.01 in. for reduction to sea-level.

UNITED STATES NAVAL SERIES.

By authority of the **SECRETARY OF THE NAVY.**

Furnished by the cooperation of the Navy Department, through Commodore Daniel Ammen, U. S. N., Chief of Bureau of Navigation.

STATIONS AND VESSELS.	True course toward—	Hourly rate in knots.	*Barometer as reported.		Temperature of the Air.		Relative Humidity.	Wind.				Clouds.				Rain-fall or melted snow in the past 24 hours.		State of Ocean.	Direction of swell from—	Weather.	Observer.
								Direction.	Velocity		Force.	Amount.		Direction.							
			Inches.	Millimeters.	Fahrenheit.	Centigrade.	Per cent.	From—	Miles per hour.	Meters per second.	0—10.	Up'er 0—10.	Low'r 0—10.	Up'er From—	Low'r From—	Inches.	Millimeters.				
Naval Academy, Annapolis, Md.			30.00	762.0	19	— 7.2	65	W			1		1		NE	0	0			Clear	
Naval Hospital, Annapolis, Md.			30.35	770.9	19	— 7.2	100	Calm			0		0			0	0				
Navy Yard, Mare Island, Cal.			30.20	767.1	46	7.8	100	E			3		5			0	0			Fair	
Navy Yard, Norfolk, Va.			30.52†	775.2†	27	— 2.8		WSW			2		1s							Hazy	
Navy Yard, Pensacola, Fla.			30.45	773.4	44.6	7.1	86	N			1		9		E	0	0			‡D. clouds	
Navy Yard, Portsmouth, N.H.			30.26	768.6	— 6	—21.1		NW			1		Fog							Foggy	
Adams, Port Royal, S. C.			30.49	774.4	50	10.0	100	NNE			3		10		E					‡D. clouds	
Ajax, Port Royal, S. C.			30.04	763.0	47	8.3		N			1		8		S					Pleasant	
Canonicus, New Orleans, La.			30.09†	764.3†	46	7.8		NE			2									Overcast	
Catskill, Port Royal, S. C.			30.38†	771.6†	48	8.9		NE			2		7		W			Smooth		Fair	
Colorado, New York, N. Y.			30.51	774.9	23	— 5.0		W			2		10			0	0			‡D. clouds	
Dictator, Port Royal, S. C.			30.48	774.2	46	7.8	92	NE			2		8		N&E	0	0			Cloudy	
Essex, Hampton Roads, Va.			30.32	770.1	35	1.7	90	SW			3		0							Blue sky	
Hartford, Hampton Roads, Va.			30.60	777.2	32	0.0		SW			2		9							Pleasant	
Huron, Port Royal, S. C.			30.55	776.0	59	15.0	88	NE			2		9		NNE					‡D. clouds	
Lehigh, Port Royal, S. C.			30.50†	774.7†	46	7.8	92	NE			1		0							Pleasant	
Manhattan, Port Royal, S. C.			30 42,	772.7,	46	7.8		NE			1		9		NNE			Smooth		‡D. clouds	
Michigan, Erie, Pa.			30.15	765.8	25	— 3.9	75	SSW			3		8		SW					Cloudy	
Monongahela, Baltimore, Md.			30.30	769.6	21	— 6.1		Calm			0		0							Blue sky	
New Hampshire, Port Royal, S. C.			30.66	778.7	47	8.3	77	NE			1		8		NW			Smooth		‡D. clouds	
Ossipee, New Orleans, La.			30.51	774.9	45	7.2		NNW			1		10		ESE					‡D. clouds	
Plymouth, Pensacola, Fla.			30.45	773.4	50	10.0	86	NNE			3		9		SW	0	0	Smooth		Cloudy	
¶ Rio Bravo, Matamoras, Mex.			30.06	763.5	53	11.7	93	W			1		7		S					‡D. clouds	
Santee, Annapolis, Md.			29.91	759.7	21	— 6.1		W			1		1		NE					Clear	
St. Louis, League Island, Pa.			30.19	766.8	17	— 8.3		SW			1		4		W	0	0			Fair	
Tallapoosa, Washington, D. C.			30.25	768.3	20	— 6.7		WSW			1		2							‡D. clouds	
Wabash, Boston, Mass.			30.32	770.1	13	—10.6		SW			0–1		4		ESE					Hazy	
Wyoming, Washington, D.C.			30.39,	771.9,	14	—10.0		Calm			0		0							Blue sky	

* It is not known that the barometer is corrected for temperature, instrumental error or elevation. † Aneroid Barometer. ‡ Detached clouds. ¶ Barometer corrected for instrumental error and reduced to sea-level.

UNITED STATES MARINE SERIES

REPORTED TO THE OFFICE OF THE CHIEF SIGNAL OFFICER OF THE ARMY.

NAMES OF VESSELS.	True course toward—	Hourly rate in knots.	Barometer reduced to sea-level.		Temperature of the Air.		Relative Humidity.	Wind.				Clouds.				State of Ocean.	Direction of swell from—	Weather.	Observer.
								Direction.	Velocity.		Force.	Amount.		Direction.					
												Up'er	Low'r	Upper.	Lower.				
			Inches.	Millimeters.	Fahrenheit.	Centigrade.	Per cent.	From—	Miles per hour.	Meters per second.	0—10.	0—10.	0—10.	From—	From—				
PACIFIC MAIL S. S. CO. MARINE SERIES. Furnished by the coöperation of ————, President; Williams, Blanchard & Co., Agents.																			
S. S. City of Peking																			Lt. Z. L. Tanner, U.S.N.
OCCIDENTAL AND ORIENTAL S. S. CO. MARINE SERIES. Furnished by the coöperation of George H. Bradbury, President; T. H. Goodman, Agent.																			
S. S. Belgic																			Capt. John Metcalf.
S. S. Gaelic																			Capt. W. H. Kidley.
S. S. Oceanic																			Capt. H. Parsell.
NORTH GERMAN LLOYD OF BREMEN MARINE SERIES. Furnished by the coöperation of A. Schumacher & Co., Agents.																			
S. S. Baltimore																			Capt. H. Andressen.
S. S. Berlin																			Capt. C. Pohle.
S. S. Braunschweig																			Capt. K. Undütsch.
S. S. Nürnberg. N. 38°, 14′, W. 70°, 12′	wsw		30.33	770.4	43.2	6.2		Var.			5–6		k		W	Rough.	W	Cloudy	Capt. A. Jaeger.
S. S. Ohio																			Capt. G. Meyer.
MARINE SERIES. (Miscellaneous.) Furnished by the coöperation of Captain James Jorgensen.																			
Schooner Addie Fuller, at Brunswick, Ga			30.34	770.6	48	8.9	85	NE	5	2.2		5k	0	SE				Detached clouds.	Capt. James Jorgensen.

NOTE.—The schooner Addie Fuller gives the amount of cloudiness by the scale 0 to 4.

COLLATED AT THE OFFICE OF THE CHIEF SIGNAL OFFICER OF THE ARMY, WASHINGTON, D. C.

The records which appear in this Bulletin are copied from the regular exchanges of this office, made in each instance in compliance with an especial request and are published for the uses of the coöperating observers. The barometric readings in the first two columns are reduced to freezing and their respective standards; those in the second two also to mean sea-level. The "weather" is generally published as given.

When the distinction between the upper and lower strata of clouds is not reported, the *kinds* or *types*, viz: cirrus, cumulus, stratus, nimbus, scud, fracto, pallio, haze, fog and smoke, as indicated, respectively, by the letters c, k, s, n, d, f, p, hz., fg, and sm'e, are generally published with the amount in the lower-cloud column. The distinction between the upper and lower strata is carefully made in the United States Series and a portion of the Canadian Series, and the types are indicated by the above letters or their combinations in the proper column.

Albert J. Myer

Brig. Gen. (Bvt. Asst.,) Chief Signal Officer, U. S. A

BULLETIN

OF

INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON JANUARY 27, 1877.

7:35 A. M. WASHINGTON mean time.

6:7 A. M. MEXICO mean time.
7:7 A. M. SAN JOSE mean time.
0:6 P. M. LISBON mean time.
0:28 P. M. MADRID mean time.
0:43 P. M. GREENWICH mean time.
0:53 P. M. PARIS mean time.
1:1 P. M. BRUSSELS mean time.
1:4 P. M. UTRECHT mean time.
1:13 P. M. BERNE mean time.

1:26 P. M. CHRISTIANIA mean time.
1:33 P. M. COPENHAGEN mean time.
1:33 P. M. ROME mean time.
1:37 P. M. BERLIN mean time.
1:49 P. M. VIENNA mean time.
1:55 P. M. STOCKHOLM mean time.
2:18 P. M. ATHENS mean time.
2:39 P. M. CONSTANTINOPLE mean time.
2:44 P. M. ST. PETERSBURG mean time.

10:2 P. M. TOKEI mean time.

ALGERIAN SERIES.

Furnished by the coöperation of General d'Eudeville, Commandant Supérieur du Génie in Algeria.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Nemours			30.35	770.8	66.0	18.9	42	Calm			0		6			0	0	Fair	Charnot.
Algiers			30.25	768.4	50.7	10.4		NE			3		10			0.138	3.5	Hidden	Peter.
La Calle			29.80	758.4	45.5	7.5	92	NW			4		9			0.827	21.0	Hidden	Fleury.
Tunis			29.82	757.5	60.8	16.0		NW			4		2			0.157	4.0	Clear	Jacques.
Sfax																			
Saida			30.25	768.3	49.6	9.8	31	NNW			3		3			0	0	Fair	Millot.
Tebessa			29.96	760.9	29.3	— 1.5		W			2		10			0.079	2 0	Hidden	Bourgeois.
Geriville			30.08	764.0	48.2	9.0	94	NNW			5		4			0	0	Fair	Lemaillot.
Laghouat			30.04	763.0	50.9	10.5	50	N			5		2			0	0	Clear	Guyot.
Biskra			30.04	762.9	59.7	15.4	33	NW			4		6			0	0	Fair	Kuntz.

NOTE.—In the originals the distinction between the amount of upper and lower clouds is apparently not made. The weather is published as given. The rain-fall is measured at 7 a. m., local time.

AUSTRIAN SERIES.

Furnished by the cooperation of Professor Ferdinand Osnaghi, Director of the Imperial and Royal Central Meteorological Institute at Vienna.

Agram			30.30	769.5	34.7	1.5	59	NE			2		6			0	0		Prof. Ivan Stosir.
Cracow, I. R. Observatory			30.34	770.5	10.0	— 7.2	100	NE			1		1			0	0		Dr. Wierzbiski.
Eperies			30.29	769.4	24.8	— 4.0	82	Calm			0		0			0	0		Julius Mikolik.
Gratz	29.92	737 1	30.35	770.8	32.4	0.2	67	S			2		8			0	0		Andreas Rospini.
Hermannstadt	28.78	731.1	30.30	769.7	26.2	— 3.2	76	ESE			2		5			0	0		Prof. Reissenberger
Kremsmünster	28.85	732.9	30.26	768.5	36.0	2.2	65	W			2		1			0	0		Prof. C. Wagner.
Lemberg			30.38	771.7	18.7	— 7.4	95	SE			2		4			0.008	0.2		Dr. T. Stanecki.
Nyiregyhaza																			Habasuda Daniel.
Pola			30.07	763.6	43.2	6.2	59	E			6		2cs			0.300	7.63		I.R.Hydrographic Office.
Szegedin			30.31	769.9	28.4	— 2.0	84	S			2		0			0	0		Karl Stancel.
Trieste			30.17	766.2	39.2	4.0	52	ENE			3		0			0	0		Prof. V. Faroli.
Vienna			30.31	769.8	31.3	— 0.4	81	Calm			0		2			0.043	1.1		I. R. Central Met. Obs'y.

NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 7 p. m., local time. The elevation of Gratz is 343.5 meters, or 1,126.9 feet; Hermannstadt, 407.8 meters, or 1,337.9 feet; Kremsmünster, 383.6 meters, or 1,258.5 feet.

BELGIAN SERIES.

Furnished by the coöperation of J. C. Houzeau, Director of the Royal Observatory at Brussels.

Arlon			30.34	770.6	32.5	0.3	82	NW			2		10			0.063	1.6		
Brussels			30.26	768.5	36.5	2.5	81	NNW			1		10		WNW	0.016	0.4	Raw	Royal Observatory.
Furnes			30.18	766.5	40.6	4.8	84	SSW			2		8			0.079	2.0		
Maseyck			30.25	768 3	31.6	— 0.2	80	WSW			2		7			0	0		

NOTE.—In the originals, the weather is occasionally given in general notes.

BRITISH SERIES

Furnished by the coöperation of Robert H. Scott, Esq., Director of the Meteorological Office, London, Alexander Buchan, Secretary of the Scottish Meteorological Society, Edinburgh, and the respective Observers.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Aberdeen			29.75	755.6	45.0	7.2		SSW	14	6.3			2			0.06	1.52	Blue sky	William Boswell.
Ardrossan			29.87	758.7	48	8.8		WSW			3		6					*D. clouds	William McNeil.
Armagh, Observatory			30.00	762.0	47.0	8.2		SW	17	7.6			4					*D. clouds	S. Call, for Dr. Robinson.
Birr Castle, (Parsonstown)			30.11	764.8	48.0	8.9		WSW			1		2					*D. clouds	J. Dreyer.
Bradford			30.02	762.5	47.9	8.8		W			3		0			0.07	1.8	Blue sky	J. McLandsborough.
Bridgetown, (Barbados)			30.06	763.5	79.5	26.4		NE			2		6					*D. clouds	Sergt. J. F. Halanen, A.
Cambridge, Observatory			30.05	763.3	39.0	3.9		S			1		10					Raining	H. Todd. [H.C.
Cardington			30.10	764.5	43.0	6.1		SW			1		10					Overcast	John McLaren.
Carlisle																			T. Bell, for J. Cartmell.
Chatham, School M. E			30.20	767.1	42.2	5.7		SE			3		10					Drizzling	Maj. C. N. Martin, R.E.
Dartmoor	28.69	728.7	30.22	767.6	46.0	7.8		W			4		5					*D. clouds	R. E. Power.
Davos Platz, (Switzerland)	24.90	632.4			22.0	— 5.6	60	E			1		0			0.10	2.6	Blue sky	Francis Redford, M. A.
Donaghadee			29.94	760.5	47	8.3		NW			3		3					*D. clouds	J. Mac Gowan.
Dover			30.18	766.6	44	6.7		WSW			4		10					Drizzling	J. Costello.
Eccles, (near Manchester)			30.01	762.2	49.2	9.6		WNW	8.0	3.6			5					*D. clouds	Thomas Mackereth.
Falmouth, Observatory			30.22	767.6	51.1	10.6		NW			3		9					Overcast	The Staff.
Fort Napier, (Natal)	27.58	700.5	29.82	757.4	84.5	29.2		NE			2		8					*D. clouds	P'vt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.95	760.7	86	30.0		NW			0		3					*D. clouds	
Galway, Queen's College			30.03	762.7	49	9.4		WSW			2		2					*D. clouds	Prof. A. H. Curtis.
Gibraltar, (Mediterranean)			30.24	768.1	65.5	18.6		W			5		2					*D. clouds	Corpl. C. Aitken, A.H.C.
Glasgow, Observatory			29.84	757.9	47.3	8.5		WSW			3		7					*D. clouds	Lewis Stuart.
Great Yarmouth			30.10	764.5	39	3.9		SW			3		8					Rain & fog	G. T. Watson.
Greenwich, Royal Obs'y			30.12	765.0	44.0	6.7		SSW			3		10					Raining	The Staff, for G. B. Airy.
Guernsey			30.21	767.3	50	10.0		SW			2		10					Drizzling	Dr. S. E. Hoskins.
Helston			30.23	767.8	52	11.1		N			4		3c			0.8	20.3	*D. clouds	M. P. Moyle.
Holyhead			30.08	764.0	49	9.4		WSW			3		0					Blue sky	John Tilston.
Kew, Observatory			30.13	765.3	44.1	6.7		SW	15	6.7			10					Raining	The Staff.
Kingstown			30.06	763.5	49	9.4		W			4		3					Blue sky	George Mitchell.
Leicester Museum			30.07	763.8	43.9	6.6		Calm			0		10					Misty	Wm. J. Harrison, F.G.S.
Malta, (Mediterranean)			29.88	758.9	56.2	13.4		NW			3		8					Raining	Corp'l. P. Bravis, A.H.C.
Nairn			29.69	754.1	41	5.0		WSW			1		2					¼ clouded	W. D. Penny.
Nassau, (Bahamas)			30.16	766.1	72	22.2		NE			3		5					Overcast	Surg. Maj. Henry.
Nottingham, Observatory			30.06	763.5	45.0	7.2		SSW			3		3 c'ck		SW	0.140	3.71	Blue sky	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			30.05	763.3	46.1	7.8		W			2		10			Blan	Blank	Foggy	Rev. Stephen Whitty.
Oxford, Radcliff Obs'y			30.09	764.3	47	8.3		SW			1		10					Misty	J. Lucas.
Plymouth			30.17	766.3	51.1	10.6		NNW			2		2					*D. clouds	John Merrifield.
Roche's Point			30.14	765.5	49	9.4		W			2		5					⅜ clouded	W. Kennedy.
Saint Ann's Head			30.14	765.5	50	10.0		WNW			3		6					*D. clouds	John C. Walker.
Saint Helier, (Jersey)			30.24	768.1	48.4	9.1		WSW			4		10					Raining	A. P. Amy.
Sandwick Manse, (Orkneys)			29.54	750.3	43	6.1		SW	35	15.6			10					Showery	Rev. C. Clouston, LL. D.
Scarborough																			F. Shaw.
Scutari Cemetery, (Turkey)			30.20	767.1	39.0	3.9		NE			2		10					Raining	Sergt. W. H. Lyne.
Sheffield			30.04	763.0	45.9	7.7		S			2		8			0.03	0.91	Overcast	W. F. Cooper.
Silloth Rectory			30.15	765.8	49.2	9.6	75	SW			3		0			0.38	9.78	Blue sky	Rev. Francis Redford.
Stonyhurst, Observatory			30.00	762.0	47.0	8.3		W			4		5					Hazy	Rev. S. J. Perry.
Stornoway, Lews C., (Hebr.)			29.69	751.6	42	5.6		W			5		10					Overcast	John Smith.
Stratfield Turgiss			30.14	765.5	45.7	7.6		SW			1		10					Raining	Rev. Charles H. Griffith.
Thurso			29.59	751.6	44	6.7		SSW			4		7					*D. clouds	John Trotter.
Truro, Royal Institution			30.22	767.6	53	11.7		NW			4		5					*D. clouds	W. Newcombe.
Valencia, Observatory			30.18	766.6	50.0	10.0		W	11	4.9			5					*D. clouds	The Staff.
SUB-SERIES.																			
Calf of Man, (Isle of Man)					43	6.1		W			4		5			0	0		Henry Mercer.
Cape Good Hope, Obs'y			29.98	761.5	85.0	29.4	43	SE	19	8.5		0	2						The Staff, for E. J. Stone.
Hobart Town, (Tasmania)			30.12	765.0	62.5	16.9	88	S			1		6cu			0.06	1.5	Hazy	Francis Abbott, F.R.A.S.
Leith, Restalrig Park			29.84	757.9	47.9	8.8		W			4					0.01	0.3	Fine	Andrew Gibb.
Mauritius, Observatory			29.87	758.7	74.3	23.5	91	E	12.1	5.4			10			1.14	29.0	Raining	C. Meldrum.
Melbourne, Observatory			30.27	768.8	52.9	11.6	69	SE	10	4.5			1			0	0	Very fine	R. L. J. Ellery.
Monach L't-house, (Hebrides)			29.97	753.6	46	7.8		W			8		10			0.3	7.6		J. Youngclause.
North Unst, (Shetland Is.)			29.42	747.3	42	5.6		W			6	0	2						Robert Burnet.

NOTE.—Generally, the originals do not give the relative humidity, rain-fall, or distinction between upper and lower clouds. The originals give the wind direction to 32 points and weather by the Beaufort notation. The originals give the barometer for Aberdeen, Cardington, Galway, Oxford, St. Helier, Sandwick, Scarborough, Stonyhurst, Leith, Monach and North Unst as read off and the amount of cloudiness for Stornoway by the scale 0 to 4. The wind-force is given by the scale 0 to 12 in the official series; 0 to 6 in the sub-series; except in lbs. per square foot for Greenwich and Hobart Town. The rain-fall is measured at Aberdeen at 10 a. m.; Bradford, 9 a. m.; Hobart Town, 7:30 a. m.; Nottingham, 6 p. m.; Mauritius, 9 a. m., local time. The elevation of Dartmoor is 1,400 feet, or 426.7 meters; Davos Platz, 5,105? feet, or 1,556.0? meters; Fort Napier, 2,200 feet, or 670.6 meters. *Detached clouds.

By authority of the MINISTER OF FOREIGN AFFAIRS.

COSTA RICA SERIES.

Furnished by the coöperation of Senor Federico Maison, Director of the Central Office of Statistics and Meteorology.

San José																			

DANISH SERIES.

Furnished by the co-operation of Captain N. Hoffmeyer, Director of the Royal Danish Meteorological Institute at Copenhagen.

Copenhagen			30.23	767.9	27.3	— 2.6	77	SE			2		10					Snowing	
Fanöe			30.23	767.8	28.0	— 2.2	79	S			4		10						
Godthaab, (Greenland)			29.10	739.1	7.0	—13.9	75	NNE			4		10						
Stykkisholm, (Iceland)			28.12	714.1	35.1	1.7	96	SE			8		10					Raining	
Thorshavn, (Faröe)			29.15	740.5	39.2	4.0	77	SW			6		7					Raining	
Vestervig			30.15	765.9	27.7	— 2.4	92	SSE			4		10						

NOTE.—The originals give the wind-force by the scale 0 to 6; occasionally, weather by Vienna symbols; no distinction between the amount of upper and lower clouds.

FRENCH SERIES.

Furnished by the cooperation of His Excellency, U. J. Le Verrier, Director of the Paris Observatory, and the respective Observers.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters	Weather	Observer.
Alençon			30.35	770.8	42.8	6	93	SW			2	..c	..n		SW	0	0	Covered	Normal School.
Amiens			30.32	770.0	46.0	7.8	93	WSW			3		5		W	0.142	3.6	Cloudy	Normal School.
Avignon			30.17	766.2	45.0	7.2	46	N			10		0			0	0	Very clear	Normal School.
Bar-sur-Seine			30.36	771.1	39.0	3.9	76	NW			1		8n		NW	Inap.	Inap.	Very cloudy	C. Saillard.
Beaumette, (near Angers)			30.34	770.5	44.1	6.7	94	SW	6.5	2.9					SW	0	0		Beaumette Observ'tory.
Beauvais			30.32	770.2	40.1	4.5	77	SSW			1		10		NW	0	0	Covered	Normal School.
Besançon			30.40	772.1	36.0	2.2	85	S			2		10			0	0	Covered	Normal School.
Bourg en Bresse			30.42	772.6	34.7	1.5	82	N			2		10n		S	0.256	6.5	Covered	Normal School.
Bourges			30.38	771.7	40.1	4.5	93	WSW			2		8		WSW	0	0	Very cloudy	Normal School.
Brest			30.20	767.0	52.3	11.3	93	SW			3		10		SW	0.030	0.75	Rain & fog	Naval Observatory.
Carcassonne			30.34	770.7	49.6	9.8	59	W			2		2		E	0	0	Slightly cl'dy	Normal School.
Caen																			Normal School.
Chartres			30.37	771.4	39.2	4	77	SW			2		10			0	0	Covered	Normal School.
Châlons-sur-Marne			30.33	770.3	41.4	5.2	78	NW			3		10n			0	0	Covered	Normal School.
Clermont			30.37	771.5	40.5	4.7	69	NE			1		5		N	0.079	2.0	Cloudy	Puy de Dome Obs'y.
Commercy			30.32	770.2	36.0	2.2	85	NW			2		10			0	0	Covered	Normal School.
Commune de Gréasque*			30.11	764.8	44.6	7.0	40	W			2		0			0	0		M. Kina.
Grenoble			30.29	769.3	38.1	3.4	63	NE			4		0			0	0	Clear	Normal School.
La Roche-sur-Yon			30.39	772.0	47.1	8.4	76	W			1		8		E	0.087	2.2	Very cloudy	Normal School.
Le Mans			30.35	771.0	38.7	3.7	73	SW			2		8		SW	0	0	Very cloudy	Normal School.
Lons-Le-Saulnier			30.39	771.9	36.5	2.5	83	NNE			2		10			0	0	Covered	Normal School.
Lorient			30.33	770.4	52.2	11.2	85	WSW			2		10			0.079	2.0	Covered	Naval Observatory.
Mâcon			30.12	765.1	43.7	6.5	97	NW			4		5		NW	0	0	Cloudy	Normal School.
Metz			30.36	771.1	35.6	2.0	81	WNW			3		9			0	0		M. Schuster.
Mirecourt			30.35	771.0	35.8	2.1	80	NW			2		10		SE	0	0	Covered	Normal School.
Nismes			30.18	766.6	49.6	9.8	72	N			4		0			0	0	Clear	Normal School.
Orleans			30.30	769.7	43.2	6.2	88	S			2		10			0	0	Covered	Normal School.
Paris, Observatory			30.33	770.4	38.7	3.7	83	WNW			1		10k		N	Inap.	Inap	Covered	National Observatory.
Parthenay																			Normal School.
Privas			30.25	768.3	42.1	5.6		N			2		2		N	0	0	Slightly cl'dy	Normal School.
Rochefort, Observatory			30.42	772.7	44.6	7.0	82	S			2		10		SE	0	0	Covered	Naval Observatory.
Rouen			30.29	769.3	39.2	4.0	78	WNW			2		10			0	0	Covered	Normal School.
Saint Lo																			Normal School.
Tarbes	29.26	743.3	30.38	771.6	47.3	8.8	84	WSW			2		2		E	0.12	3.	Slightly cl'dy	Normal School.
Villefranche			30.36	771.1	40.3	4.6	89	NE			2		5		NE	0	0	Cloudy	Normal School.
Sub-Series.																			
Fort de France, Martinique			29.93	760.2	75.2	24													L'Abbé Marchési.
Marseilles			30.07	763.7	48.9	9.4	85	NW			2		0			0	0		Marseilles Observatory.
Mont-Louis	24.96	634.0	30.28	769.0	24.8	— 4.3	45	NNW	24.2	10.83			2		N	0.217	5.5		—. Falguère.
Montsouris, Paris			30.27	768.9	37.9	3.3	86	SW			2		10		N	0.012	0.3		Montsouris Observatory
Perpignan			30.26	768.5	47.1	8.4	40	NW	37.3	16.66			0			0	0		Dr. Fines.
Pic du Midi, (Summit,) H. P.																			M. Baylac.
Pic du Midi, (Plantade,) H. P.	22.59	573.7			18.5	— 7.5		N			1		7			0.839	21.3	Snowy	General de Nansouty.
Saint Maur, (near Paris)			30.32	770.1	37.6	3.1	88	SSW			1		10			0	0	Covered	E. Renou.
Toulouse			30.44	773.1	42.6	5.9	67	NW			2		2			0	0		Toulouse Observatory.
Tours			30.36	771.1	44.1	6.7	81	SW			1		9		N	0	0		C. Marquet.
Versailles, (near Paris)			30.32	770.0	41.0	5.0	81	NW			1		9			0.010	0.26	Light fog	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai)			30.49	774.5	32.4	0.2	70	N	2.2	1.00			10			0	0		Marc Dechevrens, S. J.

Note.—Generally, the originals give the wind-force by the scale 0 to 7; no distinction between upper and lower clouds, and, in the official series, the amount by the scale 0 to 4; the rain-fall as measured at 7, 8 or 9 a. m., local time; at Clermont, 9 a. m. of the following day; the weather in general terms as published. The elevation of Clermont is 388 meters, or 1,272.9 feet; Commune de Gréasque, 322 meters, or 1,056.4 feet; Tarbes, 308 meters, or 1,010 feet; Mont-Louis, 1,586.40 meters, or 5,204.8 feet; Pic du Midi, (Summit,) 2,877 meters, or 9,439.1 feet; Pic du Midi, Plantade,) 2,366 meters, or 7,762.6 feet. In correcting the Mont-Louis barometric observations for altitude, the constant 135. millimeters has been added. *Bouches-du-Rhône

GERMAN SERIES.

Furnished by the cooperation of Professor Dr. G. Neumayer, Director of the German Naval Observatory, Hamburg.

Bamberg			30.12	765.0	31.5	— 0.3	94	W			3		10			0.039	1.0	Snowing	Prof. T. Ilob.
Berlin			30.28	769.2	24.6	— 4.1	81	W			3		10			0	0		Prof. Arndt.
Breslau			30.20	767.1	34.9	1.6	84	S			2		9			Inap.	Inap.	Light snow	Royal University Obs'y.
Carlsruhe			30.30	769.6	33.6	0.9	85	SW			3		10			Inap.	Inap.		A. Senz.
Cassel			30.24	768.0	29.8	— 1.2	78	NE			2		10		NNE	0.004	0.1	Snowing	Dr. H. Möhl.
Crefeld			30.26	768.5	30.4	— 0.9	72	N			1		9			0	0		Director Lose.
Emden			30.37	771.3	24.1	— 4.4	94	S			3		10			0.165	4.2		Prof. Prestel.
Frankfort on the Main			30.30	769.7	32.0	0.0	78	W			1		10			0.008	0.2		Physical Society.
Friedrichshafen	28.83	732.3	30.34	770.5	36.0	2.2	73	SSW			5		9			0	0		M. Wilhelm.
Hamburg			30.27	768.8	22.3	— 5.4	85	SE			2		10			Inap.	Inap.		Captain F. Hegemann.
Kiel			30.24	768.2	28.0	— 2.2	87	S			2		10			0	0		Prof. G. Karsten.
Königsberg, (Prussia)			30.32	770.0	19.8	— 6.8	78	SE			5		9			0	0		Prof. E. Luther.
Köslin			30.27	768.9	20.7	— 6.3		E			2		10			0	0		H. Müller.
Leipsic			30.29	769.3	23.4	— 4.8	88	NE			1		10		NNE	0	0		Prof. Bruhns.
Memel			30.40	772.1	19.2	— 7.1	75	SE			3		10k8			0	0	Smoke-haze	Reinbrecht & Skalweit.
Münster			30.21	767.2	28.2	— 2.1	80	N			3		10			0.016	0.4		Prof. E. Heis.
Neufahrwasser			30.30	769.7	19.9	— 6.7	78	SE			3		10			0.063	1.6	Snowing	A Lothe.
Posen			30.23	767.9	22.5	— 5.3	100	NW			3		10			0.063	1.6	Snowing	Dr. Magener.
Strassburg, (in Alsace)			30.34	770.7	35.2	1.8	77	NW			1		10		NW	0.272	6.9		Dr. Schur.
Stuttgart			30.28	769.1	33.3	0.7	87	W			1		10			0	0		Prof. Schoder.
Thorn																			Dr. Hasenbalg.
Trèves, (Trier)			30.24	768.0	33.4	0.8	86	NW			2		10			0	0	Foggy	Prof. Flesch.
Weissenburg, (Bavaria)	28.67	728.2	30.26	768.5	31.8	— 0.1	85	WSW			4		10		W	0.098	2.5		Dr. von Bebber.
Wustrow, Naval School			30.29	769.3	25.2	— 3.8	82	NE			3		10			0	0		E. F. Schütz.
German Naval Series.																			

Note.—The elevation of Friedrichshafen is 413.4 meters, or 1,356.3 feet; Weissenburg, 431 meters, or 1,414.0 ft. In the originals the distinction between the amount of upper and lower clouds is not made. It is not always certain that the remarks in the weather column refer to the moment of observation.

GREEK SERIES.

Furnished by the cooperation of Professor Dr. J. F. Julius Schmidt, Director of the Royal Observatory at Athens.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Athens			30.10	764.5	48 2	9 0		N										Clear	

Note.—The originals give the barometer corrected, but not reduced to sea-level; occasionally the kind of clouds; the weather as published. They omit the humidity, wind-force, amount of cloudiness and rain-fall.

ITALIAN SERIES.

Furnished by the cooperation of His Excellency the Minister of Agriculture, Industry and Commerce, and the respective Observers.

Udine			30.15	765.8	43.3	6.3	47	SE	4.9	2.2		0				0.012	0.3		Prof. Giovanni Clodig
Stelvio	22 04	559.8			10.0	—12.2		SE			1	0				0	0		Signora Ernesta Manfredi.
Valdobbia	22.08	560.9			18.0	— 7.8	70	NW			1	0				0	0		Ab. Dom. Mongini.
Padua			30.17	766.3	40.3	4.6	65	NE	6.9	3.1		0				0.272	6.9		Prof. Dott. Lorenzoni.
Vicenza			30.18	766.5	41.9	5.5	68	E	1.5	0.6		0				0.232	5.9		Conte Alm. Da Schio.
Verona			30.15	765.9	44.8	7.1	59	NE			1	0				0	0		Dott. B. Bertoncelli.
Bergamo	28 79	731.2	30.16	766.0	42.4	5.8	57	SW			4	0				0.035	0.9		Prof Trionfini Carlo.
Domodossola			30.18	766.5	45.3	7.4	35	S			4	1				0	0		Prof. Giuseppe Calza.
Milan			30.20	767.1	43.7	6.5	85	WNW			1	0				0	0		Ab. Gio. Capelli
Pavia			30.18	766.6	43.0	6.1	52	NE			1	0				0	0		Prof. Gio. Cantoni.
Moncalieri			30.22	767.5	42.8	6.0	54	SSE	3.1	1.4		1				0	0		Prof. P. F. Denza.
Mondovi	28.22	716.8	30.21	767.3	39.4	4.1	40	NNW			6	1		NNE		0	0		Prof. D. C. Bruno.
Porto Maurizio			30.08	764.0	51.8	11.0	15	NNE			6	0				0	0		Prof. L. Vassallo.
Genoa			30.07	763.6	51.3	10.7	28	NE	9.8	4.4		0?				0.047	1.2	Raining?	Prof. G. M. Garibaldi.
Piacenza			30.19	766.9	42.4	5.8	66	E	4.5	2.2		0				0.051	1.3		Dott. G. Manzi.
Parma			30.20	767.1	40.1	4.5	66	SW			4	1				0.819	20.8	Snowing	Prof. P. Pigorini.
Florence			30.07	763.6	45.9	7.7	60	NE			4	10		NE		0.091	2.3	Raining	Cav. F. Meucci.
Leghorn			29.98	761.6	43.9	6.6	68	ENE	21.0	9.4		7				0	0		Prof. P. Monte.
Siena	28.75	730.2	30.00	762.0	43.5	6.4	48	N	19.2	8.6		6		N		0.157	4.0	Raining	Prof. L. Toscani.
Urbino	28.46	722.8	30.09	764.3	40.1	4.5	77	NNE			4	10				0.66*	17.0	Raining	Prof. P. Serpieri.
Pesaro			30.08	763.9	46.6	8.1	71	NNE	61.6	27.5		10		NNE		0.220	5.6	Raining	Prof. Luigi Guidi.
Ancona			30.07	763.6	47.5	8.6	46	E			6	10		E		0.079	2.0	Raining	Prof. F. De— Bosis.
Grosseto			29.91	759.8	46.9	8.3	60	NNE			8	4		SE		0.717	18.2	Thunder-storm.	Avv. P. Ponticelli.
Rome			29.90	759.5	46.8	8.2	80	N	4.9	2.2		10		SE		0.138	3.5		Prof's. P. Secchi & L. Respighi.
Naples, O. U.			29.88	758.9	53.2	11.8	65	SE			2	9		S		0.039	1.0	Raining	Prof. L. Palmieri.
Lecce			29.98	761.4	50.2	10.1	59	SE	24.8	11.1		10		SE		0	0		Prof. C. De—Giorgi.
Cosenza			29.92	760.0	50.0	10.0	78	NE	3.1	1.4		10				0.173	4.4	Raining	Prof. F. D. Conti.
Cagliari																			Prof. A. Pacinotti.
Trapani, (Sicily)			29.83	757.6	55.8	13.2	59	N			2	7		S		0	0		Prof. F. Cattero.
Palermo			29.79	756.0	52.5	11.4	50	W	9.3	4.2		9		W		0	0		Prof. G. Cacciatore.
Caltanissetta	27.84	707.2	29.85	758.2	45.1	7.3	74	SW			4	10		N		0	0		Prof. A. Pagani.
Siracusa			29.80	756.9	55.0	12.8	57	SSW			2	10		SW		0.079	2.0	Raining	Prof. V. Giuliano.
Sub-Series.																			
Naples, S. R.			29.91	759.6	49.8	9.9	69	ESE	0.7	0.3		8		SW		0.059	1.5		Prof. F. Brioschi

Note.—The originals give the wind-force by the scale 0 to 4, or the velocity in kilometers per hour; generally, a distinction between upper and lower clouds occasionally the weather by the Vienna symbols. The elevation of Stelvio is 2,543.0 meters, or 8,342.9 feet; Valdobbia, 2,548.0 meters or 8,359.3 feet; Bergamo, 379.6 meters, or 1,24 3 feet; Mondovi, 556 meters, or 1,824.2 feet; Siena, 348.5 meters, or 1,143.3 feet; Urbino, 451 meters, or 1,479.7 feet; Caltanissetta, 577.3 meters, or 1,871.0 feet. *Unmelted snow.

JAPANESE SERIES.

Furnished by the coöperation of the Imperial University of Tokei, Japan.

Tokei			29.92	760.0	36	2.2		NW	5	2.2			2			0.2	5.1		Prof. P. V. Veeder.

Note.—The originals give the amount of cloudiness by the scale 0 to 4 without distinguishing between upper and lower clouds. The rain-fall is measured at 7 a. m., local time

MEXICAN SERIES.

By authority of the Secretary of Public Works.

Furnished by the coöperation of Senor Mariano Barcena, Director of the Central Meteorological Observatory in the City of Mexico.

Mexico																			Mariano Barcena. Vicente Reyes. Miguel Perez. (Engineers in charge.)

Note.—The elevation of Mexico is 2,290 meters, or 7,512.9 feet. The rain-fall is measured at 6 a. m., local time.

NETHERLANDS' SERIES.

Furnished by the cooperation of Professor Buys Ballot, Director of the Royal Meteorological Institute of the Netherlands at Utrecht.

Flushing			30.25	768.4	37.0	2.8		S			4					0.024	0.6		
Groningen			30.20	767.1	26.2	— 3.2		S								0.016	0.4		
Helder			30.22	767.6	30.7	— 0.7		S			4					0.016	0.4		
Utrecht			30.21	767.4	30.7	— 0.7	79	NNE			2		10			0.012	0.3	Dull	

Note.—The originals give the wind-pressure in kilograms per square meter; for Utrecht, they give the weather as published, from which the number of cloudiness is taken by the scale 0 to 4, without distinguishing between upper and lower clouds. It is assumed that the barometer readings have been reduced to sea-level.

NORWEGIAN SERIES.

Furnished by the cooperation of Professor H. Mohn, Director of the Royal Norwegian Meteorological Institute at Christiania.

Bergen			29.87	758.7	35.2	1.8	80	S	41.8	18.7			10			0.173	4.4		
Bróno			29.72	754.8	29.8	— 1.2	54	SW	17.9	8			9						
Christiania			30.17	766.4	26.4	— 3.1	85	SSE	15.0	6.7			10			0.157	4.0		
Tromsö			29.53	750.0	38.1	3.4	93	SSW	13.4	6			10			0	0		

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols. The cloudiness and weather at Bergen refer to 2h., p. m., local time, instead of 1h., 4 m.

PORTUGUESE SERIES.

Furnished by the coöperation of J. C. de Brito Capello, Director of the Meteorological Observatory of the Infante Don Luiz at Lisbon.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Upper. 0—10.	Clouds. Amount. Lower. 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Angra, (Azores)	.....	.....	30.45	773.5	57.2	14.0	82	W	4.3	1.9	.....	.....	8	.....	.....	0	0	.....	Dr. J. A. Sampaio.
Campo Major	.....	.....	30.33	770.4	55 8	13.2	59	NNW	7.8	3.50	.....	.....	5	NNW	.....	0	0	.....	Dr. A. M. R. dos Santos.
Funchal, (Madeira)	.....	.....	30.39	771.9	64.6	18.1	69	SW	7.0	3.13	.....	.....	7	.....	.....	0	0	.....	Capt. D. A. de Cunha.
Lisbon	.....	.....	30.37	771.5	58.3	14.6	61	NNE	12.5	5.6	.....	.....	4	NNW	.....	Inap.	Inap.	.....	The Observatory.
Ponta Delgada, (Azores)	.....	.....	30.49	774.4	60.1	15.6	73	S	4.9	2.2	.....	.....	4	.....	.....	0	0	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

NOTE.—The originals give the wind-velocity in kilometers per hour; occasionally, the weather by the Vienna symbols; the amount of cloudiness without distinguishing between upper and lower clouds; the barometer corrected but not reduced to sea-level. The rain-fall at Libson is measured at noon, instead of 0 h. 6 m., p. m.

RUSSIAN SERIES.

Furnished by the cooperation of Professor H. Wild, Director of the Imperial Central Physical Observatory of Russia, at St. Petersburg.

Warsaw	.....	.....	30.34	770.6	18.1	— 7.7	83	SE	16	7	.....	.....	2	.....	.....	.....	.....	.....	Astronomical Obs.
Wilna	.....	.....	30.57	776.4	16.6	— 8.6	87	SE	9	4	.....	.....	5	.....	.....	.....	.....	.....	Astronomical Obs.
Dorpat	.....	.....	30.57	776.4	17.4	— 8.1	79	S	4	2	.....	.....	10	.....	.....	.....	.....	Snowing.....	Physical Cabinet.
St. Petersburg	.....	.....	30.59	776.9	16.2	— 8.8	83	SW	11	5	.....	.....	10	.....	.....	.....	.....	Light snow..	Central Physical Obs.
Kuopio	.....	.....	30.39	771.9	11 7	—11.3	.....	SW	18	8	.....	.....	10	.....	.....	.....	.....	.....	Ch. Forsten.
Kieff	.....	.....	30.60	777.3	16.7	— 8.5	85	E	9	4	.....	.....	6	.....	.....	.....	.....	.....	Physical Cabinet.
Nikolaiev	.....	.....	30.52	775.2	17.8	— 7.9	65	NE	22	10	.....	.....	0	.....	.....	.....	.....	.....	Kurdakof
Kertch	.....	.....	30.34	770.5	16.7	— 8.5	79	NNE	16	7	.....	.....	8	.....	.....	.....	.....	Snowing.....	Lagorio.
Moscow	.....	.....	30.79	782.0	9.9	—12.3	77	ESE	9	4	.....	.....	8	.....	.....	.....	.....	Light snow..	Meteorological Obs.
Lugan	.....	.....	30.45	773.3	3.0	—16.1	71	NE	18	8	.....	.....	2	.....	.....	.....	.....	.....	Meteorological Obs.
Archangel	.....	.....	30.23	767.8	16.5	— 8.6	94	W	22	10	.....	.....	10	.....	.....	.....	.....	.....	Ogorodnikof.
Tiflis	28.47	723.0	29.92	760.0	40.5	4.7	71	NE	13	6	.....	.....	10	.....	.....	.....	.....	.....	Physical Observatory.
Astrakhan	.....	.....	30.18	766.5	7.2	—13.8	80	NE	25	11	.....	.....	10	.....	.....	Blank.	Blank.	.....	Sebastianof.
Kasan	.....	.....	30.56	776.1	— 5.6	—20.9	86	N	4	2	.....	.....	10	.....	.....	.....	.....	.....	Physical Cabinet.
Orenburg	.....	.....	30.28	769.0	—11.9	—24.4	55	E	13	6	.....	.....	7	.....	.....	.....	.....	.....	Tschernischei.
Ekaterinburg	29.28	743.7	30.37	771.5	—14.3	—25.7	69	Calm	0	0	.....	.....	0	.....	.....	.....	.....	.....	Meteorogical Obs.
Nukuss	.....	.....	29.86	758.5	21.6	— 5.8	95	NNE	16	7	.....	.....	10	.....	.....	.....	.....	Snowing.....	
Kasaly	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Bobrof.
Tashkend	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Michelson.
Barnaul	.....	.....	29.80	759.1	14.4	— 9.8	94	Calm	0	0	.....	.....	10	.....	.....	.....	.....	Snowing.....	Meteorological Obs.
Yeniseisk	.....	.....	29.79	756.6	—15.9	—26.6	69	NW	2	1	.....	.....	0	.....	.....	.....	.....	.....	Marks.
Irkutsk	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Usolzef.
Peking, (China)	.....	.....	30.43	773.0	22.5	— 5.3	71	Calm	0	0	.....	.....	2	.....	.....	.....	.....	.....	Physical Observatory.
Nertchinsk	28.15	714.9	30.62	777.8	—31.4	—35.2	91	Calm	0	0	.....	.....	0	.....	.....	.....	.....	.....	Meteorological Obs.
Vladivostock	.....	.....	30.14	765.6	6.8	—14.0	58	NW	4	2	.....	.....	0	.....	.....	.....	.....	.....	
Nikolaievsk, on the Amoor	.....	.....	.....	.....	28.4	— 2.0	.....	Calm	0	0	.....	.....	10	.....	.....	.....	.....	Snowing....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

NOTE.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols; they omit the rain-fall. The elevation of Tiflis is 469 meters, or 1,541.8 feet; Ekaterinburg, 306.4? m., or 1,005.2? ft.; Tashkend, 494.2? m., or 1,621.3? ft.; Irkutsk, 392 m., or 1,286 ft.; Nertchinsk, 592.0? m., or 1,942.2? ft.

SPANISH SERIES.

Furnished by the coöperation of Antonio Aguilar, Director of the Royal Observatory at Madrid, and of Don Cecilio Pujazon, Captain R. N. Director of the Naval Observatory at San Fernando.

Madrid	.....	.....	30.34	770.7	50.0	10.0	58	SW	1.5	0.67	.....	2	0	NE	.....	0	0	Light clouds	Royal Observatory.
San Fernando	.....	.....	30.32	770.2	57.2	14.0	67	N	6.5	2.9	.....	3	3	N	N	.....	.....	.....	Naval Observatory.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

NOTE.—The originals give the weather in general terms, as published; rain-fall for San Fernando from preceding to following midnight; wind-velocity for Madrid in kilometers per hour.

SWEDISH SERIES.

Furnished by the cooperation of Professor R. Rubenson, Director of the Royal Swedish Meteorological Institute, at Stockholm, and of Dr. H. H. Hildebrandsson, Chief of the Meteorological Division of the Upsala Observatory.

Haparanda	.....	.....	30.08	764.1	22.6	— 5.2	100	SW	.....	.....	4	.....	10	.....	.....	0	0	.....	
Umea	.....	.....	30.18	766.6	24.3	— 4.3	93	SW	.....	.....	4	.....	10	.....	.....	0.094	2.4	.....	
Hernosand	.....	.....	30.17	766.4	24.4	— 4.2	93	SSW	.....	.....	4	.....	8	.....	.....	0	0	.....	
Stockholm	.....	.....	30.30	769.7	23.7	— 4.6	81	S	.....	.....	4	.....	10	.....	.....	0.016	0.4	.....	
Wisby	.....	.....	30.34	770.5	24.4	— 4.2	81	S	.....	.....	4	.....	10	.....	.....	0	0	.....	
SUB-SERIES.																			
Upsala	.....	.....	30.29	769.4	23.2	— 4.9	86	SSW	11.0	4.9	.....	.....	10	.....	.....	0.010	0.25	.....	Dr. Hildebrandsson.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

NOTE.—The originals give the wind-force by the scale 0 to 6, and Upsala also velocity in meters per second; occasionally, the weather by the Vienna symbols, or in general terms; no distinction between the amount of upper and lower clouds. The rain-fall is measured at 8 a. m., local time.

SWISS SERIES.

Furnished by the coöperation of Professor R. Wolf, Director of the Observatory at Zurich, and of Professor E. Plantamour, Director of the Observatory at Geneva.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Geneva	28.85	732.9	30.33	770.4	37.8	3.2	57	NE	.....	.....	3	.....	8	.....	.....	0.028	0.7	Clouds	The Observatory.
Zurich	28.63	727.1	30.34	770.5	34.3	1.3	74	W	.....	.....	1	.....	10	.....	.....	0	0	Covered	The Observatory.
.....																			
.....																			

Note.—For Geneva the corresponding departures from the normal values are: Barometer, +5.6 mm; Thermometer, +1.2 cent.; Relative Humidity, —20 per cent.

Note.—The rain-fall is measured at Zurich at 7 a. m. on the following day. The originals give the barometer corrected but not reduced to sea-level; the wind-force by the scale 0 to 4 for Zurich; the amount of cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The elevation of Geneva is 408 meters, or 1,339 feet, and that of Zurich 470 meters, or 1,542 feet.

TURKISH SERIES.

Furnished by the coöperation of A. Coumbary, Effendi, Director of the Central Observatory at Constantinople, and of Professor C. V. A. Van Dyck, Superintendent of the Lee Observatory at Beirut.

Constantinople	.....	.....	30.23	767.7	37.6	3.1	89	ENE	16	7.0	.....	.....	10	.....	NE	0	0	.....	
Fao, (Persian Gulf)	.....	.....	30.00	762.0	66.2	19.0	.....	NW	.....	.....	1	.....	2	.....	.....	.....	.....	.....	
Salonica	.....	.....	30.21	767.2	49.1	9.5	.....	NE	.....	.....	1	.....	5	.....	.....	.....	.....	.....	
Valona	.....	.....	30.00	762.0	49.8	9.9	.....	NW	.....	.....	1	.....	0	.....	.....	.....	.....	.....	
Varna	.....	.....	30.24	768.0	23.0	— 5.0	.....	N	.....	.....	6	.....	10	.....	.....	.....	.....	.....	
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y	.....	.....	29.96	760.9	53.1	11.7	75	S	.....	.....	2	.....	7n	.....	SW	2.51	63.8	*D. clouds	Prof. C. V. A. Van Dyck.

Note.—The originals give the wind-force by the scale 0 to 7, (except Beirut, by the scale 0 to 12, and Constantinople velocity in meters per second;) the weather in general terms as published; no distinction between upper and lower clouds, and, except Constantinople and Beirut, the amount by the scale 0 to 4. It is assumed that the barometer is reduced to sea-level. *Detached clouds.

CANADIAN SERIES.

Furnished by the coöperation of Professor G. T. Kingston, Director of the Magnetic Observatory at Toronto, and Superintendent of the Meteorological Office of the Dominion of Canada, and the respective Observers. Those marked with a star (*) are also telegraphed daily to the office of the Chief Signal Officer, U. S. Army.

Bathurst, N. B	.....	.....	29.94	760.5	2.5	—16.4	89	Calm	0	0	.....	.....	10	.....	.....	.....	.....	Snowing	Hon. J. Ferguson.
Brockville, Ontario	.....	.....	29.86	758.4	28	— 2.2	.....	SW	5	2.2	.....	.....	10s	.....	SW	0.08	2.0	Cloudy	W. R. Bigg.
*Chatham, N. B	.....	.....	29.91	759.7	6	—14.4	100	NE	1	0.4	.....	.....	10s	.....	.....	0.12	3.0	Light snow	G. A. Blair.
Charlottetown, P. E. Island	.....	.....	29.95	760.7	10	—12.2	96	Calm	0	0	.....	.....	10n	.....	.....	0.150	3.81	Light snow	H. J. Cundall, C. E.
Cornwall, Ontario	.....	.....	29.82	757.4	30.8	— 0.7	79	W	.....	.....	3	.....	10s	.....	.....	0	0	Dull	James Smith, M. A.
Dalhousie, N. B	.....	.....	30.05	763.3	.....	.....	.....	E	.....	.....	2	.....	.....	.....	.....	0	0	Overcast	H. A. Johnson.
Esquimault, B. C	.....	.....	29.93	760.2	46.8	8.2	77	N	.....	.....	.....	10cs	0	.....	.....	0	0	Cloudy	W. H. Bevis.
Fredericton, N. B	.....	.....	29.91	759.7	7.1	—13.8	95	Calm	0	0	.....	.....	10n	.....	.....	0.085	2.16	Light snow	Prof. Harrison.
*Fort Garry, Manitoba	.....	.....	30.07	763.8	12	—11.1	92	S	10	4.5	.....	2k	2s	W	W	0	0	Fair	James Stewart.
Goderich, Ontario	.....	.....	30.02	762.5	23.7	— 4.6	81	Calm	.....	.....	0	2k	2s	W	.....	0	0	Fair	H. J. Strang, M. A.
Granton, Ontario	28.83	732.3	29.99	761.7	25.2	— 3.8	.....	W	.....	.....	1	1c	0	.....	.....	0	0	Clear	James Grant.
*Halifax, N. S	.....	.....	29.94	760.5	29	— 1.7	89	S	18	8.0	.....	.....	10n	.....	.....	0.110	2.79	Light snow	F. Allison, M. A.
Hamilton, Ontario	.....	.....	29.99	761.7	29.2	— 1.6	88	SW	.....	.....	1	0	0	.....	.....	0	0	Clear	G. Dickson.
Heart's Content, N. F	.....	.....	30.11	764.8	2	—16.7	100	W	.....	.....	2	.....	10	.....	.....	0	0	Overcast	E. Weedon.
*Kingston, Ontario	.....	.....	29.94	760.5	29	— 1.7	82	Calm	0	0	.....	.....	10s	.....	.....	0.01	0.3	Cloudy	S. Woods, M. A.
*Montreal, Quebec	.....	.....	29.80	756.9	15	— 9.4	87	W	12	5.4	.....	.....	10n	.....	W	0.12	3.0	Cloudy	C. H. McLeod, C. E.
*Ottawa, Ontario	.....	.....	29.79	756.7	24	— 4.4	74	W	4	1.8	.....	2ks	5n	SW	SW	0.20	5.1	Cloudy	J. B. Haney.
*Parry Sound, Ontario	.....	.....	29.92	760.0	27	— 2.8	88	N	7	3.1	.....	2ck	5n	N	N	0.02	0.5	Light snow	Rev. R. Mosley.
Port Dover, Ontario	.....	.....	29.99	761.7	29	— 1.7	89	SW	8	3.6	.....	10ck	0	W	.....	0	0	Fair	H. Morgan.
Port Hastings, N. S	.....	.....	30.02	762.5	8.8	—12.9	.....	S	2	0.9	.....	.....	.....	.....	.....	0.35	8.9	Snowing	Peter Grant.
Port Stanley, Ontario	.....	.....	30.01	762.2	29	— 1.7	79	W	10	4.5	.....	5ck	0	W	.....	0	0	Clear	M. Payne.
*Quebec, Quebec	.....	.....	29.83	757.7	14	—10.0	82	Calm	0	0	.....	.....	10n	.....	.....	0.30	7.6	Heavy snow	Capt. Ashe, R. N.
*Rockliffe, Ontario	.....	.....	29.88	758.9	20	— 6.7	88	NW	3	1.3	.....	.....	8s	.....	N	0.12	3.0	Cloudy	
St. John, N. B	.....	.....	29.87	758.7	16	— 8.9	91	Calm	0	0	.....	.....	10n	.....	.....	0.150	3.81	Cloudy	G. Murdoch, C. E.
*Saugeen, Ontario	.....	.....	29.92	760.0	31	— 0.6	89	NW	5	2.2	.....	.....	10n	.....	.....	0	0	Cloudy	K. Stewart.
Stayner, Ontario	.....	.....	29.93	760.2	30	— 1.1	79	NW	13	5.8	.....	8ck	0	NW	.....	0	0	Cloudy	R. J. Cole.
Stratford, Ontario	28.64	727.4	29.99	761.7	23.2	— 4.9	95	NW	12	5.4	.....	0	0	.....	.....	0	0	Fine	C. J. MacGregor, M. A.
*Sydney, C. B	.....	.....	30.12	765.0	5	—15.0	95	S	2	0.9	.....	.....	10n	.....	.....	0.02	0.5	Light snow	T. C. Hill.
*Toronto, Ontario	.....	.....	29.95	760.7	24	— 4.4	87	W	6	2.7	.....	2cs	2s	W	.....	0	0	Fair	Magnetic Observatory.
Woodstock, Ontario	.....	.....	30.10	764.5	24.6	— 4.1	95	W	5	2.2	.....	0	3s	.....	.....	0	0	Fair	J. Montgomery.
Sub-Series.																			
St. Johns, Newfoundland	.....	.....	30.28	769.1	3	—16.1	74	W	.....	.....	.....	.....	.....	.....	.....	0	0	Fair	John Delany.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

Note.—The originals for Brockville, Charlottetown, Port Dover, Port Stanley, Stayner, St. Johns, N. F. and those telegraphed, give the amount of cloudiness by the scale 0 to 4. The elevation of Granton is 1,015 feet, or 309.4 m.; Stratford, 1,182 feet, or 360.3 m.

UNITED STATES SERIES.

Furnished by the cooperation of Bvt. Brig. Gen. Albert J. Myer, Chief Signal Officer, U. S. Army.

STATIONS.	Barometer: Corrected for instrum'tal error and temperature. Inches.	Barometer: Corrected for instrum'tal error and temperature. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Upper. 0—10.	Clouds. Amount. Lower. 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain fall or melted snow in the past 24 hours. Inches.	Rain fall or melted snow in the past 24 hours. Millimeters.	Weather	Observer.
Albany, N. Y.	.....	.....	29.93	760.2	26	— 2.2	77	S	8	3.6	.....	0	1s	.....	.....	0	0	Clear	
Alpena, Mich.	.....	.....	30.00	762.0	28	— 2.2	67	NW	7	3.1	.....	.....	10s	.....	NW	0	0	Cloudy	
Atlantic City, N. J.	.....	.....	30.11	764.8	33	0.6	79	SW	10	4.5	.....	0	0	.....	.....	0	0	Clear	
Augusta, Ga.	.....	.....	30.32	770.1	44	6.7	92	Calm	0	0	.....	.....	10ks	.....	.....	0	0	Cloudy	
Baltimore, Md.	.....	.....	30.11	764.8	30	— 1.1	68	Calm	0	0	.....	Haze	Fog	.....	.....	0	0	Smoky	
Barnegat, N. J.	.....	.....	30.08	764.0	28	— 2.2	83	SW	10	4.5	.....	0	0	.....	.....	0	0	Clear	
Bismarck, Dakota	28.35	720.1	30.10	764.5	21	— 6.1	71	SW	2	0.9	.....	5c	Haze	NW	.....	0	0	Fair	
Boston, Mass.	.....	.....	29.89	759.2	33	0.6	69	SW	7	3.1	.....	1cs	Haze	.....	.....	0	0	Hazy	
Breckenridge, Minn.	.....	.....	30.24	768.1	8	—13.3	78	W	8	3.6	.....	0	0	.....	.....	0	0	Clear	
Buffalo, N. Y.	.....	.....	29.94	760.5	30	— 1.1	78	W	18	8.0	.....	2k	2s	W	W	0	0	Fair	
Burlington, Vt.	.....	.....	29.82	757.4	34	1.1	69	S	4	1.8	.....	.....	10s	.....	.....	0.01	0.3	Cloudy	
Cairo, Ill.	.....	.....	30.32	770.1	34	1.1	79	SW	1	0.4	.....	0	Fog	.....	.....	0	0	Clear	
Cape Hatteras, N. C.	.....	.....	30.19	766.8	48	8.9	77	W	4	1.8	.....	8cs	0	.....	.....	0	0	Cloudy	
Cape Henry, Va.	.....	.....	30.20	767.1	42	5.6	66	SW	15	6.7	.....	5k	5s	SW	.....	0	0	Cloudy	
Cape Lookout, N. C.	.....	.....	30.28	769.1	47	8.3	92	NW	7	3.1	.....	.....	10n	.....	NW	0.01	0.3	Light rain	
Cape May, N. J.	.....	.....	30.11	764.8	35	1.7	80	SW	16	7.2	.....	0	0	.....	.....	0	0	Clear	
Charleston, S. C.	.....	.....	30.28	769.1	49	9.4	77	N	5	2.2	.....	.....	10s	.....	.....	0.02	0.5	Cloudy	
Cheyenne, Wyoming	24.25	615.9	30.19	766.8	20	— 6.7	72	NW	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Chicago, Ill.	.....	.....	30.15	765.8	25	— 3.9	75	SW	7	3.1	.....	0	0	.....	.....	0	0	Clear	
Cincinnati, Ohio	.....	.....	30.13	765.3	37	2.8	71	S	7	3.1	.....	0	Fog	.....	.....	0	0	Clear	
Cleveland, Ohio	.....	.....	30.06	763.5	34.6	1.4	70	SW	16	7.2	.....	.....	Haze	.....	SW	0	0	Hazy	
Corsicana, Tex.	.....	.....	30.38	771.6	40	4.4	100	S	2	0.9	.....	.....	Fog	.....	.....	0	0	Foggy	
Davenport, Iowa	.....	.....	30.26	768.6	22	— 5.6	85	W	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Denison, Tex.	.....	.....	30.46	773.7	34	1.1	89	NW	2	0.9	.....	0	0	.....	.....	0	0	Clear	
Denver, Col.	26.07	636.8	30.29	769.4	14	—10.0	63	S	3	1.3	.....	0	0	.....	.....	0	0	Clear	
Detroit, Mich.	.....	.....	30.02	762.5	29	— 1.7	68	W	5	2.2	.....	8cs	0	.....	.....	0	0	Fair	
Dodge City, Kan.	27.75	704.8	30.29	769.4	13	—10.6	80	W	2	0.9	.....	0	0	.....	.....	0	0	Clear	
Dubuque, Iowa	.....	.....	30.22	767.6	19	— 7.2	84	Calm	0	0	.....	0	5s	.....	.....	0	0	Fair	
Duluth, Minn.	.....	.....	30.18	766.6	25	— 3.9	75	N	12	5.4	.....	0	0	.....	.....	0	0	Clear	
Eastport, Me.	.....	.....	29.85	758.2	26	— 3.3	88	Calm	0	0	.....	.....	10s	.....	W	0.16	4.1	Cloudy	
Erie, Pa.	.....	.....	30.00	762.0	35	1.7	70	SW	20	8.9	.....	.....	10s	.....	SW	0	0	Cloudy	
Escanaba, Mich.	.....	.....	30.10	764.5	27	— 2.8	77	N	20	8.9	.....	.....	10s	.....	N	0	0	Cloudy	
Fort Gibson, Indian Ter.	.....	.....	30.34	770.0	25	— 3.9	75	E	2	0.9	.....	0	0	.....	.....	0	0	Clear	
Ft. St. Michael, Alaska	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Fort Sill, Indian Ter.	29.17	740.9	30.34	770.0	35	1.7	37	N	7	3.1	.....	1c	0	W	.....	0	0	Clear	
Fort Sully, Dakota	28.52	724.4	30.30	769.0	23	— 5.0	73	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Florence, Arizona	28.52	724.4	30.04	763.0	55	12.8	.....	E	.....	.....	.....	5c	0	.....	.....	0	0	Fair	
Galveston, Tex.	.....	.....	30.41	772.4	49	9.4	93	E	2	0.9	.....	5cs	0	W	.....	0	0	Fair	
Grand Haven, Mich.	.....	.....	30.07	763.8	34	1.1	80	NW	7	3.1	.....	0	1s	.....	.....	0	0	Clear	
Indianapolis, Ind.	.....	.....	30.19	766.8	33	0.6	79	SW	6	2.7	.....	2cs	0	.....	.....	0	0	Clear	
Indianola, Tex.	.....	.....	30.39	771.9	51	10.6	100	E	10	4.5	.....	.....	10s	.....	E	0.01	0.3	Cloudy	
Jacksonville, Fla.	.....	.....	30.27	768.8	50	10.0	86	NE	2	0.9	.....	5k	0	SW	.....	0	0	Fair	
Keokuk, Iowa	.....	.....	30.22	767.6	24	— 4.4	74	W	6	2.7	.....	0	0	.....	.....	0	0	Clear	
Key West, Fla.	.....	.....	30.21	767.3	66	18.9	90	N	12	5.4	.....	0	0	.....	.....	0	0	Clear	
Kittyhawk, N. C.	.....	.....	30.24	768.1	39	3.9	82	SW	5	2.2	.....	2c	2s	SW	.....	0	0	Fair	
Knoxville, Tenn.	.....	.....	30.32	770.1	37	2.8	62	S	3	1.3	.....	.....	10ks	.....	W	0	0	Cloudy	
La Crosse, Wis.	.....	.....	30.17	766.3	23	— 5.0	60	Calm	0	0	.....	Haze	Haze	.....	.....	0	0	Hazy	
Leavenworth, Kan.	.....	.....	30.32	770.1	25	— 3.9	88	NW	3	1.3	.....	0	Fog	.....	.....	0	0	Clear	
Louisville, Ky.	.....	.....	30.22	767.6	35	1.7	90	S	10	4.5	.....	0	Fog	.....	.....	0	0	Clear	
Lynchburg, Va.	.....	.....	30.20	767.1	31	— 0.6	79	W	1	0.4	.....	0	0	.....	.....	0	0	Clear	
Malone, N. Y.	.....	.....	29.78	756.4	32	0.0	79	W	12	5.4	.....	.....	10s	.....	W	0.16	4.1	Cloudy	
Marquette, Mich.	.....	.....	30.10	764.5	30	— 1.1	68	NW	8	3.6	.....	.....	10s	.....	.....	0	0	Cloudy	
Memphis, Tenn.	.....	.....	30.37	771.4	35	1.7	90	SW	2	0.9	.....	.....	Fg'sm	.....	.....	0	0	Foggy	
Milwaukee, Wis.	.....	.....	30.16	766.1	24	— 4.4	74	NW	10	4.5	.....	0	0	.....	.....	0	0	Clear	
Mobile, Ala.	.....	.....	30.38	771.9	42	5.6	83	N	5	2.2	.....	2c	Fog	.....	.....	0	0	Clear	
Montgomery, Ala.	.....	.....	30.36	771.4	46	7.8	84	Calm	0	0	.....	5cs	Sm'k	W	.....	0	0	Fair	
Morgantown, W. Va.	29.05	737.9	30.14	765.5	36	2.2	70	S	6	2.7	.....	0	0	.....	.....	0	0	Clear	
Mt. Washington, N. H.	23.23	590.0	29.59	751.6	10	—12.2	100	NW	48	21.5	.....	.....	Fog	.....	.....	0	0	Foggy	
Nashville, Tenn.	.....	.....	30.30	769.6	40	4.4	82	Calm	0	0	.....	0	2s	.....	S	Inap.	Inap.	Fair	
New Haven, Conn.	.....	.....	29.99	761.7	32	0.0	69	SW	5	2.2	.....	Haz	0	.....	.....	0	0	Clear	
New London, Conn.	.....	.....	29.97	761.2	33	0.6	69	SW	10	4.5	.....	0	Haze	.....	.....	0	0	Clear	
New Orleans, La.	.....	.....	30.38	771.6	47	8.3	69	N	4	1.8	.....	4cs	0	W	.....	0	0	Fair	
Newport, R. I.	.....	.....	29.95	760.7	33	0.6	79	SW	13	5.8	.....	0	0	.....	.....	0	0	Clear	
New York, N. Y.	.....	.....	30.04	763.0	28	— 2.2	67	SW	14	6.3	.....	0	Sm'k	.....	.....	0	0	Clear	
Norfolk, Va.	.....	.....	30.20	767.1	40	4.4	63	SW	8	3.6	.....	Sck	0	.....	.....	0	0	Fair	
North Platte, Neb.	27.35	694.7	30.20	767.1	10	—12.2	89	W	12	5.4	.....	0	0	.....	.....	0	0	Clear	
Omaha, Neb.	29.12	739.6	30.07	763.8	26	— 3.3	76	NW	3	1.3	.....	0	0	.....	.....	0	0	Clear	
Oswego, N. Y.	.....	.....	29.93	760.2	35	1.7	75	W	12	5.4	.....	Haz	8s	.....	W	0	0	Cloudy	
Pembina, Dakota	.....	.....	30.10	764.5	10	—12.2	90	S	8	3.6	.....	.....	10s	.....	.....	0	0	Cloudy	
Philadelphia, Pa.	.....	.....	30.10	764.5	26	— 3.3	76	NW	12	5.4	.....	0	Sm'k	.....	.....	0	0	Clear	
Pike's Peak, Col.	17.84	453.1	30.05	763.3	5	—15.0	50	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Pittsburgh, Pa.	.....	.....	30.06	763.5	38	3.3	63	W	8	3.6	.....	0	0	.....	.....	0	0	Clear	
Port Huron, Mich.	.....	.....	29.99	761.7	27	— 2.8	88	W	6	2.7	.....	2cs	Haze	W	.....	0	0	Fair	
Portland, Me.	.....	.....	29.85	758.2	18	— 7.8	84	Calm	0	0	.....	Haz	Haz	.....	.....	0	0	Hazy	
Portland, Oregon	.....	.....	29.97	761.2	43	6.1	50	E	3	1.3	.....	.....	10s	.....	.....	0	0	Cloudy	
Punta Rassa, Fla.	.....	.....	30.25	768.3	62.6	16.7	91	NE	7	3.1	.....	0	0	.....	.....	0	0	Clear	
Rochester, N. Y.	.....	.....	29.90	759.4	34	1.1	79	W	21	9.4	.....	0	1s	.....	W	0	0	Clear	
Salt Lake City, Utah	5.98	669.9	30.31	769.9	11	—11.7	70	NE	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Sandy Hook, N. J.	.....	.....	30.00	762.0	36	2.2	62	SW	22	9.8	.....	0	0	.....	.....	0	0	Clear	
San Diego, Cal.	.....	.....	30.12	765.0	49	9.4	85	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
San Francisco, Cal.	.....	.....	30.01	762.2	51	10.6	86	SW	4	1.8	.....	Haz	Haze	.....	.....	0	0	Hazy	
Santa Fé, N. M.	23.44	595.4	29.98	761.5	24	— 4.4	48	E	3	1.3	.....	0	0	.....	.....	0	0	Clear	
Savannah, Ga.	.....	.....	30.31	769.9	48	8.9	85	N	5	2.2	.....	2cs	1s	W	.....	0	0	Fair	
Shreveport, La.	.....	.....	30.44	773.2	37	2.8	90	Calm	0	0	.....	1c	0	.....	.....	0	0	Clear	
Smithville, N. C.	.....	.....	30.27	768.8	46	7.8	92	Calm	0	0	.....	.....	10s	.....	W	0.22	5.6	Cloudy	
Springfield, Mass.	.....	.....	29.93	760.2	30	— 1.1	73	S	4	1.8	.....	0	0	.....	.....	0	0	Clear	
St. Louis, Mo.	.....	.....	30.28	769.1	32	0.0	79	W	8	3.6	.....	0	0	.....	.....	0	0	Clear	
St. Marks, Fla.	.....	.....	30.30	769.6	45	7.2	96	N	4	1.8	.....	0	Fog	.....	.....	0	0	Clear	
St. Paul, Minn.	.....	.....	30.19	766.8	10	— 7.2	84	SW	3	1.3	.....	0	2s	.....	.....	0	0	Fair	
St. Paul's Island, Alaska	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Thatcher's Island, Mass.	.....	.....	29.87	758.7	33	0.6	69	SW	24	10.7	.....	0	0	.....	.....	0	0	Clear	
Toledo, Ohio	.....	.....	30.08	764.0	37	2.8	71	SW	8	3.6	.....	5ck	Haze	W	SW	0	0	Fair	
Tucson, Arizona	27.66	702.6	30.21	767.3	33.	0.6	.....	SE	.....	.....	.....	5c	0	SW	.....	0	0	Fair	
Tybee Island, Ga.	.....	.....	30.28	769.1	48	8.1	77	NW	8	3.6	.....	5k	0	NW	.....	0	0	Fair	
Vicksburg, Miss.	.....	.....	30.45	773.4	35.5	1.9	80	Calm	0	0	.....	2cs	Sm'k	.....	SE	0	0	Fair	
Virginia City, M. T.	24.46	621.3	29.94	760.5	18	— 7.8	68	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Washington, D. C.	.....	.....	30.14	765.5	24.5	— 4.2	77	Calm	0	0	.....	0	ts sm'k	.....	NW	0	0	Smoky	
Wilmington, N. C.	.....	.....	30.26	768.6	46	7.8	77	SW	1	0.4	.....	.....	10ks	.....	SW	0.04	1.0	Cloudy	

UNITED STATES SERIES.—CONTINUED.

STATIONS.	BAROMETER. Corrected for instrum'tal error and temperature. Inches.	BAROMETER. Corrected for instrum'tal error and temperature. Millimeters.	BAROMETER. Reduced to sea-level. Inches.	BAROMETER. Reduced to sea-level. Millimeters.	TEMPERATURE OF THE AIR. Fahrenheit.	TEMPERATURE OF THE AIR. Centigrade.	RELATIVE HUMIDITY. Per cent.	WIND. Direction. From—	WIND. Velocity. Miles per hour.	WIND. Velocity. Meters per second.	WIND. Force. 0—10.	CLOUDS. Amount. U. 'er 0—10.	CLOUDS. Amount. Low'r 0—10.	CLOUDS. Direction. Upper. From—	CLOUDS. Direction. Lower. From—	RAIN-FALL OR MELTED SNOW IN THE PAST 24 HOURS. Inches.	RAIN-FALL OR MELTED SNOW IN THE PAST 24 HOURS. Millimeters.	WEATHER.	OBSERVER.
Wood's Holl, Mass.	.....	.....	29.97	761.2	39	3.9	63	SW	16	7.2	.....	0	0	.....	.....	0	0	Clear	
Yankton, Dakota	28.97	735 8	30.37	771.4	21	— 6.1	71	W	3	1.3	.....	0	0	.....	.....	0	0	Clear.....	
Yuma, Arizona	.....	.....	30.16	766.1	51	10.6	.....	N	.....	.....	.....	0	2s	.....	NW	0	0	Fair	
SUB-SERIES.																			
Kingston, Jamaica, W. I.	.....	.....	30.27	768.8	74	23.3	76	Calm	0	0	.....	0	0	.....	.....	0	0	.....	James Gall.
Navassa, W. I.	.....	.....	.....	.....	78	25.6	.....	E	.....	.....	1	.....	.....	.....	.....	0	0	Clear	F. M. Everett.
Clifton, Ja., W. I.	27.29	693.2	30.09	764.3	66	18.9	78	NE	0.5	0.2	.....	0	0	.....	.....	0	0	Fine, clear..	C. Partridge.
Paramaribo, D. Guiana, S.A	.....	.....	30.04	763.0	79	26.1	87	E	.....	.....	2	.....	10n	.....	.....	0.180	4.57	Rainy.....	C. J. Hering.
Batavia, Dutch Guiana, S.A.	30.10	764.4	.....	.....	77.0	25.0	.....	NE	.....	.....	.....	.....	.....	.....	.....	0.305	7.75	Cloudy.....	Dr. H. Groot.
Medellin, Colombia, S. A...	25.27	641.8	.....	.....	64 0	17.8	74	Calm	.....	.....	0	1cs	1ks	.....	.....	0.92	23.4	Fair	Thomas Herran.
York Factory, B. A.	.....	.....	29.77	756.1	6.0	—14.4	88	S	16	7.2	.....	.....	10n	.....	.....	0.07	1.8	Snowing.....	J. Fortescue, W. Wood
Honolulu, Oahu, H. I.	.....	.....	30.06	763.5	70	21.1	95	Calm	.....	.....	0	.....	.....	.....	.....	0	0	Clear	Daniel Smith.
Makawao, Maui, H. I.	.....	.....	29.82	757.4	65	18.3	83	S	.....	.....	1	0	4n	.....	.....	0	0	.....	F. L. Clarke.

NOTE.—The originals give the amount of cloudiness by the scale 0 to 4, except York Factory, Makawao, Medellin and Paramaribo. The elevation of the barometer at Bismarck is 1,677 feet, or 511.1 meters; Cheyenne, 6,057.3 ft., or 1,846.2 m.; Clifton, about 9,992 ft., or 88[illegible] m.; Denver, 5,135 ft., or 1,565.2 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Florence, 1,550 (?) ft., or 472.5 (?) m.; Makawao, 2,205 ft., or 672.1 m.; Morgantown, 1,027.9 ft., or 313.3 m.; Medellin, 4,876 ft., or 1,486.2 m.; Mt. Washington, 6,285 ft., or 1,915.6 m.; North Platte, 2,846 ft., or 867.4 m.; Omaha, 1,054.6 ft., or 321.4 m.; Pike's Peak, 14,150.7 ft., or 4,313.1 m.; Salt Lake City, 4,362.2 ft., or 1,329.6 m.; Santa Fé, 6,862.2 (?) ft., or 2,091.6 (?) m.; Tucson, 2,513 (?) ft., or 772.1 (?) m.; Virginia City, 5,480 (?) ft., or 1,670.3 (?) m.; Yankton, 1,278 ft., or 389.5 m. The following constants are added in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Denver, 5.22 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fé, 6.54 in.; Tucson, 2.59 in.; Virginia City, 5.48 in. The elevation of Batavia is about 6 feet; the barometric readings need the addition of 0.2 mm. or 0.01 in. for reduction to sea-level.

UNITED STATES NAVAL SERIES.

By authority of the **SECRETARY OF THE NAVY.**

Furnished by the cooperation of the Navy Department, through Commodore Daniel Ammen, U. S. N., Chief of Bureau of Navigation.

STATIONS AND VESSELS.	True course toward—	Hourly rate in knots.	*Barometer as reported.		Temperature of the Air.		Relative Humidity.	Wind.				Clouds.				Rain-fall or melted snow in the past 24 hours.		State of Ocean.	Direction of swell from—	Weather.	Observer.
								Direction.	Velocity		Force.	Amount.		Direction.							
												Upper.	Lower.	Upper.	Lower.						
			Inches.	Millimeters.	Fahrenheit.	Centigrade.	Per cent.	From—	Miles per hour.	Meters per second.	0—10.	0—10.	0—10.	From—	From—	Inches.	Millimeters.				
Naval Academy, Annapolis, Md.			29.76	755.9	28	— 2.2	70	SSW			1		1		S	0	0			Clear	
Naval Hospital, Annapolis, Md.			30.14	765.5	20	— 6.7	100	S			1		1			0	0			‡D. clouds	
Navy Yard, Mare Island, Cal.			30.12	765.0	53	11.7	93	SE			4		10			0	0			‡D. clouds	
Navy Yard, Norfolk, Va.			30.32†	770.1†	37	2.8		SW			3		6cs							‡D. clouds	
Navy Yard, Pensacola, Fla.			30.38	771.6	45	7.2	92	NNW			1		2			0	0			Clear	
Navy Yard, Portsmouth, N.H.			29.85	758.2	22	— 5.6		WNW			1		0								
Adams, Port Royal, S. C.			30.33	770.4	52	11.1	93	NNW			2		10		E					‡D. clouds	
Ajax, Port Royal, S. C.			30.02	762.5	49	9.4		N			2		8		S					Pleasant	
Canonicus, New Orleans, La.			30.06,	763.5†	48	8.8	92	N			2		2		W					Clear	
Catskill, Port Royal, S. C.			30.23†	767.8†	50	10.0		N			2		7		W			Smooth		Hazy	
Colorado, New York, N. Y.			30.12	765.0	32	0.0		W			1		0			0	0			Blue sky	
Dictator, Port Royal, S. C.			30.33	770.4	49	9.4	100	NNW			1–2		9			Blank	Blank			Cloudy	
Essex, Norfolk, Va.			30.22	767.6	40	4.4	100	SW			1–2		9		NE					‡D. clouds	
Hartford, Hampton Roads, Va.			30.39	771.9	40	4.4		S			3		8		SE					Pleasant	
Huron, Port Royal, S. C.			30.40	772.1	52	11.1	86	NNE			2		8		SE					‡D. clouds	
Lehigh, Port Royal, S. C.			30.20,	767.1†	54	12.2	93	S			2		2		S					Pleasant	
Manhattan, Port Royal, S. C.			30.30,	769.6†	50	10.0		N			2		8		NE			Smooth		‡D. clouds	
Michigan, Erie, Pa.			30.10	764.5	33	0.6	89	WSW			2		5		W					Cloudy	
Monongahela, Baltimore, Md.			30.10	764.5	37	2.8		Calm			0		5							Hazy	
New Hampshire, Port Royal, S. C.			30.56	774.7	52	11.1	73	N			1		8		NW			Smooth		‡D. clouds	
Omaha, Panama			30.08	764.0	77	25.0	86	NNW			3		0			0	0	mod.		Pleasant	
Ossipee, New Orleans, La.			30.40	773.7	51	10.6		N			1		2							Hazy	
Pensacola, Panama			30.1.	764.8	78	25.6	86	NW			1		1							‡D. clouds	
Plymouth, Pensacola, Fla.			30.4.	772.7	54	11.7	73	NNW			2		1			0	0	Smooth		Hazy	
¶ Rio Bravo, Matamoras, Mex.			30.00	763.5	57	13.9	94	NW			1		8		NE					Hazy	
Santee, Annapolis, Md.			29.7.	754.9	30	— 1.1		SSW			1		1		S					Clear	
St. Louis, League Island, Pa.			29.97	761.2	30	— 1.1		SW			2		3		SW	0	0			Fair	
Tallapoosa, Washington, D. C.			30.03	762.7	22	— 5.6		Calm			0		1		S					‡D. clouds	
Wabash, Boston, Mass.			29.90	761.0	34.7	1.4		WSW			3		0							Hazy	
Wyoming, Washington, D. C.			30.08	764.0	24	— 4.4		SW			1		9							‡D. clouds	

* It is not known that the barometers are corrected for temperature, instrumental error or elevation. † Aneroid Barometer. ‡ Detached clouds. ¶ Barometer corrected for instrumental error and reduced to sea-level.

UNITED STATES MARINE SERIES

REPORTED TO THE OFFICE OF THE CHIEF SIGNAL OFFICER OF THE ARMY.

NAMES OF VESSELS.	True course toward—	Hourly rate in knots.	Barometer reduced to sea-level.		Temperature of the Air.		Relative Humidity.	Wind.				Clouds.				State of Ocean.	Direction of swell from—	Weather.	Observer.
								Direction.	Velocity.		Force.	Amount.		Direction.					
												Up'er	Low'r	Upper.	Lower.				
			Inches.	Millimeters.	Fahrenheit.	Centigrade.	Per cent.	From—	Miles per hour.	Meters per second.	0—10.	0—10.	0—10.	From—	From—				
PACIFIC MAIL S. S. CO. MARINE SERIES.																			
Furnished by the coöperation of ————, President; Williams, Blanchard & Co., Agents.																			
S. S. City of Peking																			Lt. Z. L. Tanner, U.S.N
OCCIDENTAL AND ORIENTAL S. S. CO. MARINE SERIES.																			
Furnished by the coöperation of George H. Bradbury, President; T. H. Goodman, Agent.																			
S. S. Belgic																			Capt. John Metcalf.
S. S. Gaelic																			Capt. W. H. Kidley.
S. S. Oceanic																			Capt. H. Parsell.
NORTH GERMAN LLOYD OF BREMEN MARINE SERIES.																			
Furnished by the coöperation of A. Schumacher & Co., Agents.																			
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S. S. Berlin																			Capt. C. Pohle.
S. S. Braunschweig																			Capt. K. Undütsch.
S. S. Nürnberg																			Capt. A. Jaeger.
S. S. Ohio																			Capt. G. Meyer.
MARINE SERIES. (Miscellaneous.)																			
Furnished by the coöperation of Captain James Jorgensen.																			
Schooner Addie Fuller, at Brunswick, Ga.			30.24	768.1	50	10.0	93	N	6	2.7		0	2s		NW			Clear	Capt. James Jorgensen.

NOTE.—The schooner Addie Fuller gives the amount of cloudiness by the scale 0 to 4.

COLLATED AT THE OFFICE OF THE CHIEF SIGNAL OFFICER OF THE ARMY, WASHINGTON, D. C.

The records which appear in this Bulletin are copied from the regular exchanges of this office, made in each instance in compliance with an especial request and are published for the uses of the coöperating observers. The barometric readings in the first two columns are reduced to freezing and their respective standards; those in the second two also to mean sea-level. The "weather" is generally published as given.

When the distinction between the upper and lower strata of clouds is not reported, the *kinds* or *types*, viz: cirrus, cumulus, stratus, nimbus, scud, fracto, pallio, haze, fog and smoke, as indicated, respectively, by the letters c, k, s, n, d, f, p, hz., fg, and sm'e, are generally published with the amount in the lower-cloud column. The distinction between the upper and lower strata is carefully made in the United States Series and a portion of the Canadian Series, and the types are indicated by the above letters or their combinations in the proper column.

Albert J. Myer

Brig. Gen. (Bvt., Assgd.,) Chief Signal Officer, U. S. A

BULLETIN

OF

INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON JANUARY 28, 1877.

7:35 A. M. WASHINGTON mean time.

0:7 A. M. MEXICO mean time.
7:7 A. M. SAN JOSE mean time.
0:6 P. M. LISBON mean time.
0:28 P. M. MADRID mean time.
0:43 P. M. GREENWICH mean time.
0:53 P. M. PARIS mean time.
1:1 P. M. BRUSSELS mean time.
1:4 P. M. UTRECHT mean time.
1:18 P. M. BERNE mean time.

10:2 P. M. TOKEI mean time.

1:26 P. M. CHRISTIANIA mean time.
1:33 P. M. COPENHAGEN mean time.
1:33 P. M. ROME mean time.
1:37 P. M. BERLIN mean time.
1:49 P. M. VIENNA mean time.
1:55 P. M. STOCKHOLM mean time.
2:18 P. M. ATHENS mean time.
2:39 P. M. CONSTANTINOPLE mean time.
2:44 P. M. ST. PETERSBURG mean time.

ALGERIAN SERIES.

Furnished by the coöperation of General d'Endeville, Commandant Supérieur du Génie in Algeria.

STATIONS.	Barometer. Corrected for instrum't'al error and temperature. Inches.	Barometer. Corrected for instrum't'al error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Nemours			30.50	774.6	61.3	16.3	47	Calm			0		0			0	0	Clear	Charnot.
Algiers			30.43	773.0	54.1	12.3		N			4		7			0.197	5.0	Cloudy	Peter.
La Calle			30.13	765.3	54.7	12.6	72	NNW			4		8			0.315	8.0	Cloudy	Fleury.
Tunis			30.08	763.9	50.0	10.0		NW			5		6			0.118	3.0	Fair	Jacques.
Sfax																			
Saida																			
Tebessa			30.41	772.3	46.8	8.2	44	NNW			3		3			0	0	Fair	Millot.
Teniet			30.15	765.7	32.0	0.0		N			3		10			0.669	17.0	Hidden	Bourgeois.
Gerfville			30.24	768.1	41.0	5.0	49	NNW			5		2			0	0	Clear	Lemaillot.
Laghouat			30.18	766.6	50.0	10.0	50	N			6		1			0	0	Clear	Guyot.
Biskra			30.23	767.7	61.3	16.3	42	NW			4		8			0	0	Cloudy	Kuntz.

NOTE.—In the originals the distinction between the amount of upper and lower clouds is apparently not made. The weather is published as given. The rain-fall is measured at 7 a. m., local time.

AUSTRIAN SERIES.

Furnished by the cooperation of Professor Ferdinand Osnaghi, Director of the Imperial and Royal Central Meteorological Institute at Vienna.

Agram			30.41	772.3	35.8	2.1	61	SE			1	4				0	0		Prof. Ivan Stozir.
Cracow, I. R. Observatory			30.34	770.6	28.4	— 2.0	94	NE			1	10				0	0		Dr. Wierzbiski.
Eperies			30.38	771.7	25.7	— 3.5	85	N			2	10				0	0		Julius Mikolik.
Gratz																			
Hermannstadt	29.10	739.0	30.42	772.6	33.8	1.0	68	SSW			2	7				0	0		Andreas Rospini.
Kremsmünster	28.90	734.0	30.43	772.8	27.5	— 2.5	79	ESE			2	5				0	0		Prof. Reissenberger
Lemberg	28.94	735.0	30.34	770.7	35.6	2.0	71	W			3	10				0	0		Prof. C. Wagner.
Nyiregyhaza			30.39	771.8	21.6	— 5.8	95	SE			1	3				0	0		Dr. T. Stanecki.
Pola																			Habzsuda Daniel.
Szegedin			30.32	770.1	44.8	7.1	65	NW			2	18				0	0		I.R.Hydrographic Office.
Trieste			30.44	773.2	31.1	— 0.5	85	Calm			0	10				0	0		Karl Stancel.
Vienna			30.35	770.8	44.6	7.0	37	E			1	0				0	0		Prof. V. Farolfi.
			30.36	771.2	30.6	— 0.8	85	Calm			0	10				0.020	0.5		I.R. Central Met. Obs'y.

NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 7 p. m., local time. The elevation of Gratz is 343.5 meters, or 1,126.9 feet; Hermannstadt, 407.8 meters, or 1,337.9 feet; Kremsmünster, 383.6 meters, or 1,258.5 feet.

BELGIAN SERIES.

Furnished by the cooperation of J. C. Houzeau, Director of the Royal Observatory at Brussels.

Arlon			30.30	769.5	36 9	2.7	100	WSW			3	10				0.787	20.0		
Brussels			30.10	764.4	44.2	6.8	92	SSW			4	10s		SW		0.120	3.05	Covered	Royal Observatory.
Furnes			30.02	762.5	46.2	7.9	90	SSW			3	10				0.059	1.5		
Maeseyck			30.14	765.5	42.8	6 0	93	SSW			5	10				0.146	3.7		

NOTE.—In the originals, the weather is occasionally given in general notes.

BRITISH SERIES.

Furnished by the coöperation of Robert H. Scott, Esq., Director of the Meteorological Office, London, Alexander Buchan, Secretary of the Scottish Meteorological Society, Edinburgh, and the respective Observers.

STATIONS.	Barometer. Corrected for instrumental error and temperature. Inches.	Barometer. Corrected for instrumental error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Aberdeen			29.36	745.7	41.7	5.4		SW	25	11.2			2			0.175	4.45	Blue sky	William Boswell.
Ardrossan																			William McNeil.
Armagh, Observatory			29.66	753.4	37.3	2.9		SSW	21	9.4						Blank	Blank		S. Call, for Dr. Robinson.
Birr Castle, (Parsonstown)			29.80	756.9	39.6	4.2		SSW			4–5		10					Raining	J. Dreyer.
Bradford																0.10	2.5		J. McLandsborough.
Bridgetown, (Barbados)			30.05	763.3	79.3	26.6		NE			3		7					*D. clouds	Sergt. J. F. Halanen, A.
Cambridge, Observatory			29.86	758.4	48.0	8.9		SSW			3		7					*D. clouds	H. Todd. [H.C.
Cardington			29.86	758.4	50.0	10.0		SW			3		9					Overcast	John McLaren.
Carlisle																			T. Bell, for J. Cartmell.
Chatham, School M. E.			30.03	762.7	49.2	9.6		W			4		6					Drizzling	Maj. C. N. Martin, R.E.
Dartmoor	28.58	725.9	30.11	764.8	45.4	7.4		W			5		7					*D. clouds	R. E. Power.
Davos Platz, (Switzerland)	25.04	636.0			36.0	2.2	63	E			1		1			0.130	3.30	Blue sky	Francis Redford, M. A.
Donaghadee			29.61	752.1	43	6.1		W			5		10					Overcast	J. Mac Gowan.
Dover			29.95	760.7	47	8.3		SW			3		7					¾ clouded	J. Costello.
Eccles, (near Manchester)			29.72	754.9	46.4	8.0		WSW	10.6	4.7			6					*D. clouds	Thomas Mackereth.
Falmouth, Observatory			30.06	763.5	50.7	10.4		W			6		5					Squally	The Staff.
Fort Napier, (Natal)	27.69	703.3	29.93	760.2	73.6	23.1		E			3		10					Overcast	P'vt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.90	759.4	87	30.6		NE			0		4					*D. clouds	
Galway, Queen's College			29.71	754.6	42	5.6		SW			7		10					Hailing	Prof. A. H. Curtis.
Gibraltar, (Mediterranean)			30.44	773.2	61.7	16.5		E			5		1					Blue sky	Corpl. C. Aitken, A. H.C.
Glasgow, Observatory			29.48	748.8	37.8	3.2		W			5		10					Raining	Lewis Stuart.
Great Yarmouth			29.85	758.2	46	7.8		SSW			5		7					*D. clouds	G. T. Watson.
Greenwich, Royal Obs'y			29.92	760.0	48.0	8.9		SW			4		10					Raining	The Staff, for G. B. Airy.
Guernsey			30.08	764.0	52.5	11.4		SW			6		10					Drizzling	Dr. S. E. Hoskins.
Helston			30.16	766.1	51	10.6		W			6		4k			0.7	17.8	Fine	M. P. Moyle.
Holyhead			29.76	755.9	45	7.2		W			6		4					*D. clouds	John Tilston.
Kew, Observatory			29.91	759.7	48.0	8.9		SW	19	8.5			9					Drizzling	The Staff.
Kingstown			29.76	755.9	44	6.7		W			5		2			Blank	Blank	Blue sky	George Mitchell.
Leicester Museum			29.79	756.7	51.0	10.6		W			4		4					*D. clouds	Wm. J. Harrison, F.G.S.
Malta, (Mediterranean)			29.84	757.9	55.2	12.9		NW			4		10					Raining	Corp'l. P. Bravis, A.H.C.
Nairn			29.22	742.2	39	3.9		WSW			6		10					Overcast	W. D. Penny.
Nassau, (Bahamas)			30.09	764.3	72	22.2		NW			3		8					Gloomy	Surg. Maj. Henry.
Nottingham, Observatory			29.76	755.9	50.0	10.0		SW			6		5ks,d		SW	0.027	0.69	*D. clouds	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			29.78	756.4	51.1	10.6		WSW			6		1					*D. clouds	Rev. Stephen Whitty.
Oxford, Radcliff Obs'y			29.86	758.4	52	11.1		WSW			3		9					Overcast	J. Lucas.
Plymouth			30.03	762.7	51.8	11.0		WSW			4		2					*D. clouds	John Merrifield.
Roche's Point			29.92	760.0	45	7.2		W			6		5					Cloudy	W. Kennedy.
Saint Ann's Head																			John C. Walker.
Saint Helier, (Jersey)			30.12	765.0	51.8	11.0		WSW			6		10					Overcast	A. P. Amy.
Sandwick Manse, (Orkneys)			29.09	738.9	42.2	5.7		SW	33	14.8			8					Showery	Rev. C. Clouston, LL. D.
Scarborough																			F. Shaw.
Scutari Cemetery, (Turkey)			30.32	770.1	39.8	4.3		NE			2		7			Blank	Blank	*D. clouds	Sergt. W. H. Lyne.
Sheffield			29.73	755.1	48.4	9.1		WSW			6		7			0.294	7.47	Squally	W. F. Cooper.
Silloth Rectory			29.59	751.6	44.8	7.1	77	W			6		3			0.130	3.30	*D. clouds	Rev. Francis Redford
Stonyhurst, Observatory			29.72	754.9	40.2	4.6		W			4		10					Overcast	Rev. S. J. Perry.
Stornoway, Lews C., (Hebr.)																			John Smith.
Strathfield Turgiss			29.91	759.7	52.2	11.2		W			2		10					Showery	Rev. Charles H. Griffith.
Thurso			29.12	739.6	41	5.0		SSW			6		6					*D. clouds	John Trotter.
Truro, Royal Institution			30.06	763.5	52	11.1		W			7		4					*D. clouds	W. Newcombe.
Valencia, Observatory			29.93	760.2	42.5	5.8		W	39	17.4			7					Squally	The Staff.
SUB-SERIES.																			
Calf of Man, (Isle of Man)					42	5.6		W			4		5			0.10	2.5		Henry Mercer.
Cape Good Hope, Obs'y			29.98	761.5	83.5	28.6	69	SE	2	0.9		0	2						The Staff, for E. J. Stone.
Hobart Town, (Tasmania)			29.92	760.0	66.0	18.9	94	S			1		0			0.03	0.8		Francis Abbott, F.R.A.S.
Leith, Restalrig Park			29.50	749.3	38.0	3.3		W			4		10s			0.21	5.3	Stormy	Andrew Gibb.
Mauritius, Observatory			29.88	758.9	77.6	25.3	85	NE	22.6	10.1			10			3.86	98.0	Raining	C. Meldrum.
Melbourne, Observatory			30.01	762.2	57.0	13.9	77	SE	2	0.9			0			0	0	Fine	R. L. J. Ellery.
Monach L't-house, (Hebrides)			30.08	764.0	45	7.2		W			8		10			0.7	17.8		J. Youngclause.
North Unst, (Shetland Is.)			29.01	736.8	42	5.6		SW			8	10	10	S		Blank	Blank		Robert Burnet.

NOTE.—Generally, the originals do not give the relative humidity, rain-fall, or distinction between upper and lower clouds. The originals give the wind direction to 32 points and weather by the Beaufort notation. The originals give the barometer for Aberdeen, Cardington, Galway, Oxford, St. Helier, Sandwick, Scarborough, Stonyhurst, Leith, Monach and North Unst as read off and the amount of cloudiness for Stornoway by the scale 0 to 4. The wind-force is given by the scale 0 to 12 in the official series; 0 to 6 in the sub-series; except in lbs. per square foot for Greenwich and Hobart Town. The rain-fall is measured at Aberdeen at 10 a. m.; Bradford, 9 a. m.; Hobart Town, 7:30 a. m.; Nottingham, 6 p. m.; Mauritius, 9 a. m., local time. The elevation of Dartmoor is 1,400 feet, or 426.7 meters; Davos Platz, 5,1052 feet, or 1,556.0? meters; Fort Napier, 2,200 feet, or 670.6 meters. *Detached clouds.

By authority of the
MINISTER OF FOREIGN AFFAIRS.

COSTA RICA SERIES.

Furnished by the coöperation of Senor Federico Maison, Director of the Central Office of Statistics and Meteorology.

STATIONS.																				
San José																				

DANISH SERIES.

Furnished by the coöperation of Captain N. Hoffmeyer, Director of the Royal Danish Meteorological Institute at Copenhagen.

Copenhagen			29.99	761.8	32.5	0.3	90	SSE			2		10					Foggy	
Fanöe			29.90	759.5	37.0	2.8	98	S			4		8						
Godthaab, (Greenland)			29.43	747.5	10.0	—12.2	74	NNE			2		10						
Stykkisholm, (Iceland)			28.72	729.4	26.1	— 3.3	96	Calm			0		8						
Thorshavn, (Faröe)			28.51	724.2	42.4	5.8	69	SW			6		10					Raining	
Vestervig			29.72	754.9	35.6	2.0	96	E			2		10						

NOTE.—The originals give the wind-force by the scale 0 to 6; occasionally, weather by Vienna symbols; no distinction between the amount of upper and lower clouds.

FRENCH SERIES.

Furnished by the cooperation of His Excellency, U. J. Le Verrier, Director of the Paris Observatory, and the respective Observers.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Upper. 0—10.	Clouds. Amount. Lower. 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters	Weather	Observer.
Alençon	.....	.....	30.22	767.5	42.8	6	95	SW	.....	.....	4	..c	..n	.....	SW	0.055	1.4	Covered	Normal School.
Amiens	.....	.....	30.19	766.9	44.2	6.8	78	SSW	.....	.....	3	.....	8	.....	S	0.449	11.4	Very cloudy	Normal School.
Avignon	.....	.....	30.39	771.9	50.2	10.1	39	N	.....	.....	3	.....	0	.....	.....	0	0	Very clear...	Normal School.
Bar-sur-Seine	.....	.....	30.33	770.3	43.3	6.3	94	SW	.....	.....	1	.....	10	.....	SW	0.004	0.1	Raining.....	C. Saillard.
Beaunette, (near Angers)	.....	.....	30.26	768 7	52.9	11.6	100	SW	10.3	4.6	.....	.....	10	.....	SW	0.071	1.8	Raining.....	Beaunette Observ'tory.
Beauvais	.....	.....	30.17	766 4	48.4	9.1	84	SW	.....	.....	2	.....	8	.....	WSW	0.012	0.30	Very cloudy	Normal School.
Besançon	.....	.....	30.45	773.3	41.7	5.4	66	S	.....	.....	2	.....	10	.....	SW	0	0	Covered	Normal School.
Bourg en Bresse	.....	.....	30.48	774.2	39.4	4.1	70	S	.....	.....	1	.....	2cn	.....	N	0	0	Slightly cl'dy	Normal School.
Bourges	.....	.....	30.35	770.9	46.0	7.8	80	WSW	.....	.....	2	.....	5	.....	WSW	0.106	2.7	C oudy.....	Normal School.
Brest	.....	.....	30.14	765.6	53.1	11.7	90	W	.....	.....	5	.....	10	.....	W	0.049	1.25	Rain & fog...	Naval Observatory.
Carcassonne	.....	.....	30.40	772.2	49.6	9.8	54	W	.....	.....	2	.....	5	.....	E	0	0	Cloudy.....	Normal School.
Cluen	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Chartres	.....	.....	30.23	767.8	48.2	9	94	SW	.....	.....	4	.....	10	.....	.....	0.047	1.2	Covered	Normal School.
Châlons-sur-Marne	.....	.....	30.26	768.6	43.0	6.1	94	S	.....	.....	4	.....	10n	.....	.....	0.189	4.8	Covered	Normal School.
Clermont	.....	.....	30.37	771.5	52.0	11.1	61	NE	.....	.....	1	.....	2	.....	N	0	0	Slightly cl'dy	Puy de Dome Obs'y.
Commercy	.....	.....	30.28	769.0	41.0	5	94	SW	.....	.....	2	.....	10	.....	.....	0	0	Covered	Normal School.
Commune de Gréasque*	.....	.....	30.35	770.9	49.6	9.8	33	NW	.....	.....	2	.....	?	.....	NW	0	0	.....	M. Kina.
Grenoble	.....	.....	30.37	771.5	41.5	5.3	61	WNW	.....	.....	6	.....	10kn	.....	NW	0	0	Covered	Normal School.
La Roche-sur-Yon	.....	.....	30.34	770.6	52.2	11.2	97	S	.....	.....	1	.....	10	.....	.....	0.118	3.0	Covered	Normal School.
Le Mans	.....	.....	30.29	769.4	48.4	9.1	97	SW	.....	.....	2	.....	10	.....	.....	0	0	Covered	Normal School.
Lons-Le-Saulnier	.....	.....	30.42	772.7	41.9	5.5	57	N	.....	.....	4	.....	5	.....	S	.....	.....	Raining.....	Normal School.
Lorient	.....	.....	30.26	768.6	55.4	13.0	81	WSW	.....	.....	2	.....	10	.....	SW	0.067	1.7	Covered	Naval Observatory.
Mâcon	.....	.....	30.21	767.3	40.3	4.6	77	S	.....	.....	4	.....	10	.....	.....	0	0	Covered	Normal School.
Metz	.....	.....	30.34	770.5	38.5	3.6	90	S	.....	.....	4	.....	10	.....	.....	0.492	12.5	.....	M. Schuster.
Mirecourt	.....	.....	30.33	770.3	37.6	3.1	93	SSW	.....	.....	4	.....	10	.....	NNE	0.094	2.4	Covered	Normal School.
Nismes	.....	.....	30.35	770.8	53.2	11.8	57	NE	.....	.....	2	.....	0	.....	.....	0	0	Clear.....	Normal School.
Orleans	.....	.....	30.22	767.6	46.4	8	100	SSW	.....	.....	2	.....	10	.....	.....	0.020	0.5	Covered	Normal School.
Paris, Observatory	.....	.....	30.22	767.5	47.3	8.5	91	SW	.....	.....	3	.....	10k	.....	WSW	0.048	1.23	Misty.....	National Observatory.
Parthenay	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Privas	.....	.....	30.43	772.8	46.0	7.8	.....	N	.....	.....	2	.....	2	.....	N	0	0	Slightly cl'dy	Normal School.
Rochefort, Observatory	.....	.....	30.41	772.4	53.1	11.7	77	WSW	.....	.....	4	.....	10	.....	NE	0	0	Covered	Naval Observatory.
Rouen	.....	.....	30.15	765.8	50.5	10.3	78	SSW	.....	.....	2	.....	10	.....	.....	0.051	1.3	Covered	Normal School.
Saint Lo	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Tarbes	29.30	744.3	30.58	776.6	48.2	9	83	E	.....	.....	2	.....	0	.....	.....	0	0	Clear.....	Normal School.
Villefranche	.....	.....	30.40	773.7	46.3	7.4	80	SE	.....	.....	2	.....	5	.....	W	0	0	Cloudy.....	Normal School.
SUB-SERIES.																			
Fort de France, Martinique	.....	.....	29.87	758.7	75.2	24	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	L'Abbé Marchésl.
Marseilles	.....	.....	30.26	769.2	51.4	10.8	44	WNW	.....	.....	1	.....	1	.....	.....	0	0	Partly cl'dy.	Marseilles Observatory.
Mont-Louis	25.13	638.4	30.45	773.4	41.4	5.2	59	NW	7.4	3.33	.....	.....	6	.....	NW	0	0	.....	—. Falguère.
Montsouris, Paris	.....	.....	30.20	767.1	47.7	8.7	93	SW	.....	.....	3	.....	10	.....	SSW	0.039	1.0	.....	Montsouris Observatory
Perpignan	.....	.....	30.37	771.4	57.0	13.9	47	N	18.6	8.33	.....	.....	4	.....	NW	0	0	.....	Dr. Fines.
Pic du Midi, (Summit,) H. P.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. Baylac.
Pic du Midi, (Plantade,) H. P.	22.75	577.8	.....	.....	35 6	2.0	.....	N	.....	.....	1	.....	4	.....	.....	0	0	Fair.....	General de Nansouty.
Saint Maur, (near Paris)	.....	.....	30.21	767.2	46.6	8.1	97	SW?	.....	.....	2	.....	10	.....	.....	0.102	2.6	Covered	L. Renou.
Toulouse	.....	.....	30.30	774.7	45.9	7.7	79	WNW	.....	.....	3	.....	3	.....	.....	0	0	.....	Toulouse Observatory.
Tours	.....	.....	30.29	769.3	50.4	10.2	86	SW	.....	.....	2	.....	10	.....	.....	0.102	2.6	Rainy.....	C. Marquet.
Versailles, (near Paris)	.....	.....	30.20	767.0	48.2	9.0	92	NW?	.....	.....	1	.....	10	.....	.....	0.035	0.90	Rainy.....	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai)	.....	.....	30.24	768.1	38.3	3.5	91	ENE	9.3	4.17	.....	.....	10	.....	.....	0.236	6.0	Rainy.....	Marc Dechevrens, S. J.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—Generally, the originals give the wind-force by the scale 0 to 7; no distinction between upper and lower clouds, and, in the official series, the amount by the scale 0 to 4; the rain-fall as measured at 7, 8 or 9 a. m., local time; at Clermont, 9 a. m. of the following day; the weather in general terms as published. The elevation of Clermont is 388 meters, or 1,272.9 feet; Comm une de Gréasque, 322 meters, or 1,056.4 feet; Tarbes, 308 meters, or 1,010 feet; Mont-Louis, 1,586.40 meters, or 5,204.8 feet; Pic du Midi, (Summit,) 2,877 meters, or 9,439.1 feet; Pic du Midi, Plantade,) 2,366 meters, or 7,762.6 feet. In correcting the Mont-Louis barometric observations for altitude, the constant 135. millimeters has been added. *Bouches-du-Rhône

GERMAN SERIES.

Furnished by the cooperation of Professor Dr. G. Neumayer, Director of the German Naval Observatory, Hamburg.

Bamberg	.....	.....	30.24	768.1	36.1	2.3	82	W	.....	.....	2	.....	10	.....	.....	0	0	.....	Prof. T. Hoh.
Berlin	.....	.....	30.18	766.6	36.1	2.3	91	S	.....	.....	1	.....	10	.....	.....	0.075	1.9	.....	Prof. Arndt.
Breslau	.....	.....	30.25	768.4	33.6	0.9	79	SSW	.....	.....	3	.....	10	.....	.....	0	0	.....	Royal University Obs'y.
Carlsruhe	.....	.....	30.30	769.7	42.8	6.0	70	SW	.....	.....	3	.....	10	.....	.....	0	0	.....	A. Senz.
Cassel	.....	.....	30.22	767.5	37.0	2.8	83	SW	.....	.....	4	.....	8	SW	.....	0	0	.....	Dr. H. Möhl.
Crefeld	.....	.....	30.12	765.1	43.3	6.3	85	SE	.....	.....	2	.....	9	.....	.....	0.04	1.	.....	Director Lose.
Emden	.....	.....	30.11	764.7	34.9	1.6	98	SSW	.....	.....	2	.....	10	.....	.....	0.165	4.2	.....	Prof. Prestel.
Frankfort on the Main	.....	.....	30.30	769.6	37.2	2.9	91	SSW	.....	.....	1	.....	10	.....	.....	0.039	1.0	Foggy.....	Physical Society.
Friedrichshafen	28.93	734.7	30.42	772.7	39.7	4.3	66	SW	.....	.....	3	.....	8	.....	.....	0.413	10.5	Raining.....	M. Wilhelm.
Hamburg	.....	.....	30.10	764.4	34.5	1.4	100	SW	.....	.....	3	.....	10	.....	.....	0.059	1.5	Foggy	Captain F. Hegemann.
Kiel	.....	.....	30.01	762.3	35.6	2.0	95	SW	.....	.....	2	.....	10	.....	.....	0.020	0.5	.....	Prof. G. Karsten.
Königsberg, (Prussia)	.....	.....	30.25	768 3	23.0	— 5.0	82	SW	.....	.....	2	.....	10	.....	.....	0.126	3.2	Snowing.....	Prof. E. Luther.
Koslin	.....	.....	30.18	766.6	27.9	— 2.3	.....	S	.....	.....	2	.....	10	.....	.....	0	0	.....	H. Müller.
Leipsic	.....	.....	30.22	767.6	37.4	3.0	83	SW	.....	.....	3	.....	9	W	.....	0.165	4.2	.....	Prof. Bruhns.
Memel	.....	.....	30.26	768.6	20.5	— 6.4	93	S	.....	.....	4	.....	Fog	.....	.....	0.067	1 7	Light snow.	Reinbrecht & Skalweit.
Münster	.....	.....	30.15	765.7	44.4	6.9	87	SW	.....	.....	1	.....	10	.....	.....	0	0	.....	Prof. E. Heis.
Neufahrwasser	.....	.....	30.23	767.7	25.3	— 3.7	80	SSW	.....	.....	3	.....	7	SW	.....	0.012	0.3	.....	A Lothe.
Posen	.....	.....	30.22	767.5	31.5	— 0.3	95	SSW	.....	.....	1	.....	10	.....	.....	0	0	.....	Dr. Magener.
Strassburg, (in Alsace)	.....	.....	30.34	770.5	43.7	6.5	68	SW	.....	.....	3	.....	10	W	.....	0	0	.....	Dr. Schur.
Stuttgart	.....	.....	30.30	769.6	43.7	6.5	67	NW	.....	.....	1	.....	8	.....	.....	0.083	2.1	.....	Prof. Schoder.
Thorn	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Dr. Hasenbalg.
Treves, (Trier)	.....	.....	30.20	767.1	39 2	4.0	93	SW	.....	.....	4	.....	10	.....	.....	0.807	20.5	Foggy	Prof. Flesch.
Weissenburg, (Bavaria)	28.76	730.5	30.34	770.7	34.7	1.5	89	WSW	.....	.....	3	.....	10	W	.....	0	0	.....	Dr. von Bebber.
Wustrow, Naval School	.....	.....	30.17	766.2	32.5	0.3	96	SSW	.....	.....	5	.....	10	.....	.....	0	0	Foggy.....	E. F. Schütz.
GERMAN NAVAL SERIES.																			
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—The elevation of Friedrichshafen is 413.4 meters, or 1,356.3 feet; Weissenburg, 431 meters, or 1,414.0 ft. In the originals the distinction between the amount of upper and lower clouds is not made. It is not always certain that the remarks in the weather column refer to the moment of observation.

GREEK SERIES.

Furnished by the coöperation of Professor Dr. J. F. Julius Schmidt, Director of the Royal Observatory at Athens.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Athens			30.28	769.1	43 7	6.5		NE.			Very strong							Clear, smoke	

Note.—The originals give the barometer corrected, but not reduced to sea-level; occasionally the kind of clouds; the weather as published. They omit the humidity, wind-force, amount of cloudiness and rain-fall.

ITALIAN SERIES.

Furnished by the cooperation of His Excellency the Minister of Agriculture, Industry and Commerce, and the respective Observers.

Udine			30.32	770.1	44.8	7.1	32	SE	4.3	1.9			0			0	0		Prof. Giovanni Clodig
Stelvio	22.24	564.9			17.6	— 8.0		SE			1		0			0	0		Signora Ernesta Manfredi.
Valdobbia	22.27	565.7			23.4	— 4.8	62	W			4		0			0	0		Ab. Dom. Mongini.
Padua			30.35	770.8	40.1	4.5	52	NW	5.6	2.5			0			0	0		Prof. Dott. Lor nzoni.
Vicenza			30.35	770.8	42.8	6.0	59	W	1.8	0.8			0			0	0		Conte Alm. Da Schio.
Verona			30.35	770.9	41.5	5.3	72	W			1		0			0	0		Dott. B. Bertoncelli.
Bergamo																			Prof Trionfini Carlo.
Domodossola			30.37	771.3	40.1	4.5	52	Calm			0		1			0	0		Prof. Giuseppe Calza.
Milan			30.36	771.1	42.6	5.9	77	SE			1		0			0	0		Ab. Gio. Capelli
Pavia			30.37	771.4	37.9	3.3	63	SE			1		0			0	0		Prof. Gio. Cantoni.
Moncalieri			30.38	771.7	41.2	5.1	66	SE	4.9	2.2			1			0	0		Prof. P. F. Denza.
Mondovi	28.37	720.5	30.35	771.0	39.0	3.9	49	NNE			2		1	N		0	0		Prof. D. C. Bruno.
Porto Maurizio			30.35	771.0	52.3	11.3	43	SSW			2		0			0	0		Prof. L. Vassallo.
Genoa			30.32	770.1	50.2	10.1	23	N	9.4	4.2			0			0	0		Prof. G. M. Garibaldi.
Piacenza			30.39	771.9	38.8	3.8	67	E	0	0			0			0	0		Dott. G. Manzi.
Parma			30.38	771.7	38.7	3.7	71	S			2		1			0	0		Prof. P. Pigorini.
Florence			30.32	770.2	45.5	7.5	45	NE			4		0			0	0		Cav. F. Meucci.
Leghorn			30.31	769.9	47.1	8.4	43	ENE	11.2	5.0			0			0	0		Prof. P. Monte.
Siena	29.05	737.8	30.30	769.6	44.9	6.8	51	NNE	0 7	0.3			0			0	0		Prof. L. Toscani.
Urbino	28.75	730.3	30.39	771.8	37.0	2.8	72	N			4		8			0	0		Prof. P. Sernieri.
Pesaro			30.37	771.3	41.2	5.5	68	WNW	19.2	8.6			8	NW		0	0		Prof. Luigi Guidi.
Ancona			30.37	771.3	43.2	6.2	67	NW			4		10			0.354	9.0	Raining	Prof. F. De— Bosis.
Grosseto			30.27	768.9	51.6	10.9	54	NNE			4		2	SE		0	0		Avv. P. Ponticelli.
Rome			30.22	767.6	55.6	13.1	47	NW	4.9	2.2			0			0	0		Prof's. P. Secchi & L. Respighi.
Naples, O. U			30.21	767.2	57.4	14.1	42	ESE			6		5	SSE		0	0		Prof. L. Palmieri.
Lecce			30.25	768.3	52.2	11.2	53	NNW	9.4	4.2			2	N		0	0		Prof. C. De—Giorgi.
Cosenza			30.17	766.4	52.7	11.5	80	NE	12.5	5.6			5			0.142	3.6	Raining	Prof. F. D. Conti.
Cagliari																			Prof. A. Pacinotti.
Riposto, (Sicily)			29.99	761.7	53.6	12.0	88	ESE			6		10	N		0.63	17 6	Raining	Prof. F. Caffero.
Palermo			29.97	761.3	54.5	12.5	77	E	17.4	7.8			10			0.276	7.0	Raining	Prof. G. Cacciatore.
Caltanissetta	28.04	712.2	30.05	763.2	44.2	6.8	88	NNE			6		10	NW		0.20	5.1	Raining	Prof. A. Pagani.
Siracusa			29.94	760.5	58.1	14.5	77	ESE			6		10	ESE		0.58	14.8	Raining	Prof. V. Giuliano.
Sub-Series.																			
Naples, S. R.			30.23	767.9	53.4	11.9	49	ENE	3.1	1.4			9	NW		0.03	1.0		Prof. F. Brioschi

Note.—The originals give the wind-force by the scale 0 to 4, or the velocity in kilometers per hour; generally, no distinction between upper and lower clouds occasionally the weather by the Vienna symbols. The elevation of Stelvio is 2,543.0 meters, or 8,342.9 feet; Valdobbia, 2,548.0 meters or 8,359.3 feet; Bergamo, 379.6 meters, or 1,245 3 feet; Mondovi, 556 meters, or 1,824.2 feet; Siena, 348.5 meters, or 1,143.3 feet; Urbino, 451 meters, or 1,479.7 feet; Caltanissetta, 570.3 meters, or 1,871.0 feet. *Unmelted snow.

JAPANESE SERIES.

Furnished by the coöperation of the Imperial University of Tokei, Japan.

Tokei			30.12	766.0	34	1.1		Calm	0	0			2			0	0		Prof. P. V. Veeder.

Note.—The originals give the amount of cloudiness by the scale 0 to 4 without distinguishing between upper and lower clouds. The rain-fall is measured at 7 a. m., cal time

By authority of the Secretary of Public Works.

MEXICAN SERIES.

Furnished by the coöperation of Senor Mariano Barcena, Director of the Central Meteorological Observatory in the City of Mexico.

Mexico																			Mariano Barcena. Vicente Reyes. Miguel Perez. (Engineers in charge.)

Note.—The elevation of Mexico is 2,290 meters, or 7,512.9 feet. The rain-fall is measured at 6 a. m., local time.

NETHERLANDS' SERIES.

Furnished by the cooperation of Professor Buys Ballot, Director of the Royal Meteorological Institute of the Netherlands at Utrecht.

Flushing			30.06	763.5	43.9	6.6		SSW			5					0.016	0.4		
Groningen			29.95	760.6	35.6	2.0										0.043	1.1		
Heider			29.94	760.5	41.7	5.4		S			5					0.047	1.2		
Utrecht			30.00	762.1	40.5	4.7	96	S			4		10			0.122	3.1	Dull	

Note.—The originals give the wind-pressure in kilograms per square meter; for Utrecht, they give the weather as published, from which the amount of cloudiness is taken by the scale 0 to 4, without distinguishing between upper and lower clouds. It is assumed that the barometer readings have been reduced to sea-level.

NORWEGIAN SERIES.

Furnished by the cooperation of Professor H. Mohn, Director of the Royal Norwegian Meteorological Institute at Christiania.

Bergen			29.53	750.0	38.5	3.6	73	S	29.5	13.2			10			0.248	6.3		
Brönö			29.44	747.7	33.8	1.0	81	SW	24.6	11			10					Snowing	
Christiania			29.82	757.4	29.7	— 1.3	86	S	5.8	2.6			10			0.118	3.0		
Tromsö			29.16	740.7	34.5	1.4	74	SSE	20.1	9			2			0	0		

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols. The cloudiness and weather at Bergen refer to 2h., p. m., local time, instead of 1h., 4

PORTUGUESE SERIES.

Furnished by the coöperation of J. C. de Brito Capello, Director of the Meteorological Observatory of the Infante Don Luiz at Lisbon.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Angra, (Azores)	.....	.....	30.66	778.7	57.9	14.4	89	NE	10.5	4.7	.....	.....	7	.....	.....	.....	.....	Raining	Dr. J. A. Sampaio.
Campo Major	.....	.....	30.45	773.4	58.1	14.7	61	E	0.9	0.42	.....	.....	0	.....	.....	0	0	.....	Dr. A. M. R. dos Santos.
Funchal, (Madeira)	.....	.....	30.42	772.0	65.8	18.8	65	SW	8.4	3.76	.....	.....	0	.....	.....	0	0	.....	Capt. D. A. de Cunha.
Lisbon	.....	.....	30.53	774.8	57.4	14.1	78	NNE	3.8	1.7	.....	.....	0	.....	.....	0	0	.....	The Observatory.
Ponta Delgada, (Azores)	.....	.....	30.65	778.6	59.7	15	66	NE	6.9	3.1	.....	.....	3	.....	.....	0	0	.....	.....

Note.—The originals give the wind-velocity in kilometers per hour; occasionally, the weather by the Vienna symbols; the amount of cloudiness without distinguishing between upper and lower clouds; the barometer corrected but not reduced to sea-level. The rain-fall at Libson is measured at noon, instead of 0 h. 6 m., p. m.

RUSSIAN SERIES.

Furnished by the coöperation of Professor H. Wild, Director of the Imperial Central Physical Observatory of Russia, at St. Petersburg.

Warsaw	.....	.....	30.30	769.7	24.8	— 4.0	95	SE	7	3	.....	.....	10	.....	.....	.....	.....	Snowing	Astronomical Obs.
Wilna	.....	.....	30.37	771.4	18.0	— 7.8	66	S	4	2	.....	.....	10	.....	.....	.....	.....	.....	Astronomical Obs.
Dorpat	.....	.....	30.21	767.3	17.1	— 8.3	87	SSW	9	4	.....	.....	10	.....	.....	.....	.....	Snowing	Physical Cabinet.
St. Petersburg	.....	.....	30.32	767.5	11.8	—11.2	84	S	16	7	.....	.....	10	.....	.....	.....	.....	Light snow	Central Physical Obs.
Kuopio	.....	.....	30.03	762.7	12.6	—10.8	.....	S	18	8	.....	.....	10	.....	.....	.....	.....	Snowing	Ch. Forsten.
Kieff	.....	.....	30.63	778.0	— 4.7	—20.4	100	SE	9	4	.....	.....	0	.....	.....	.....	.....	.....	Physical Cabinet.
Nikolaiev	.....	.....	30.64	778.3	7.6	—13.5	75	ENE	13	6	.....	.....	0	.....	.....	.....	.....	.....	Kurdukof.
Kertch	.....	.....	30.51	774.9	16.5	— 8.6	82	NE	16	7	.....	.....	1	.....	.....	.....	.....	.....	Lagorio.
Moscow	.....	.....	30.37	770.9	2.5	—16.4	75	S	4	2	.....	.....	0	.....	.....	.....	.....	.....	Meteorological Obs.
Lugan	.....	.....	30.65	778.5	— 1.1	—18.4	72	Calm	0	0	.....	.....	0	.....	.....	.....	.....	.....	Meteorological Obs.
Archangel	.....	.....	30.09	764.2	8.2	—13.2	80	WSW	22	10	.....	.....	10	.....	.....	.....	.....	.....	Ogorodnikof.
Tiflis	28.84	732.4	30.32	770.0	37.9	3.3	48	NW	13	6	.....	.....	6	.....	.....	.....	.....	.....	Physical Observatory.
Astrukhan	.....	.....	30.66	778.7	8.2	—13.2	60	NE	7	3	.....	.....	2	.....	.....	.....	.....	.....	Sebastianof.
Kasan	.....	.....	30.35	771.9	7.7	—13.7	94	W	9	4	.....	.....	4	.....	.....	.....	.....	.....	Physical Cabinet.
Orenburg	.....	.....	30.11	764.8	— 7.1	—21.7	63	E	13	6	.....	.....	5	.....	.....	.....	.....	.....	Tschernischei.
Ekaterinburg	29.23	742.4	30.30	769.7	— 7.4	—21.9	68	WSW	4	2	.....	.....	3	.....	.....	.....	.....	.....	Meteorogical Obs.
Nukuss	.....	.....	30.44	773.1	6.4	—14.2	70	NE	11	5	.....	.....	9	.....	.....	.....	.....	.....	.....
Kasaly	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Bobrof.
Tashkend	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Michelson.
Barnaul	.....	.....	29.32	759.9	0.1	—17.7	73	NE	4	2	.....	.....	10	.....	.....	.....	.....	.....	Meteorological Obs.
Yeniseisk	.....	.....	30.23	767.8	—39.6	—39.8	77	NW	2	1	.....	.....	0	.....	.....	.....	.....	.....	Marks.
Irkutsk	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Usolzef.
Peking, (China)	.....	.....	30.33	770.4	29.5	— 1.4	71	Calm	0	0	.....	.....	0	.....	.....	.....	.....	.....	Physical Observatory.
Nertchinsk	28.07	712.9	30.53	775.4	—30.6	—34.8	94	Calm	0	0	.....	.....	0	.....	.....	.....	.....	.....	Meteorological Obs.
Vladivostock	.....	.....	30.02	762.4	4.6	—15.2	64	Calm	0	0	.....	.....	0	.....	.....	.....	.....	.....	.....
Nikolaievsk, on the Amoor	.....	.....	.....	.....	31.3	— 0.4	.....	E	13	6	.....	.....	10	.....	.....	.....	.....	Snowing	.....

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols; they omit the rain-fall. The elevation of Tiflis is 409 meters, or 1,341.8 feet; Ekaterinburg, 306.4? m., or 1,005.2? ft.; Tashkend, 494.2? m., or 1,621.3? ft.; Irkutsk, 392 m., or 1,286 ft.; Nertchinsk, 592.0? m., or 1,942.2? ft.

SPANISH SERIES.

Furnished by the coöperation of Antonio Aguilar, Director of the Royal Observatory at Madrid, and of Don Cecilio Pujazon, Captain R. N. Director of the Naval Observatory at San Fernando.

Madrid	.....	.....	30.48	774.2	51.4	10.8	64	S	2.2	1.00	.....	0	0	.....	.....	0	0	Clear	Royal Observatory.
San Fernando	.....	.....	30.47	774.0	60.8	16.0	50	NE	6.5	2.9	.....	1	2	N	N	.....	.....	.....	Naval Observatory.

Note.—The originals give the weather in general terms, as published; rain-fall for San Fernando from preceding to following midnight; wind-velocity for Madrid in kilometers per hour.

SWEDISH SERIES.

Furnished by the coöperation of Professor R. Rubenson, Director of the Royal Swedish Meteorological Institute, at Stockholm, and of Dr. H. H. Hildebrandsson, Chief of the Meteorological Division of the Upsala Observatory.

Haparanda	.....	.....	29.82	757.5	18.9	— 7.6	95	SW	.....	.....	6	.....	10	.....	.....	Inap.	Inap.	Snowing	
Umea	.....	.....	29.79	756.6	22.6	— 5.2	96	SW	.....	.....	6	.....	10	.....	.....	0	0	.....	
Hernosand	.....	.....	29.73	755.2	21.9	— 5.6	96	S	.....	.....	2	.....	7	.....	.....	0	0	.....	
Stockholm	.....	.....	29.96	760.9	24.4	— 4.2	81	SSW	.....	.....	4	.....	5	.....	.....	0.020	0.5	.....	
Wisby	.....	.....	30.08	763.9	28.4	— 2.2	83	SE	.....	.....	4	.....	10	.....	.....	0.043	1.1	.....	
Sub-Series.																			
Upsala	.....	.....	29.93	760.3	23.0	— 5.0	90	S	12.3	5.5	.....	.....	10	W	.....	0.054	1.38	.....	Dr. Hildebrandsson.

Note.—The originals give the wind-force by the scale 0 to 6, and Upsala also velocity in meters per second; occasionally; the weather by the Vienna symbols, or in general terms; no distinction between the amount of upper and lower clouds. The rain-fall is measured at 8 a. m., local time.

SWISS SERIES.

Furnished by the coöperation of Professor R. Wolf, Director of the Observatory at Zurich, and of Professor E. Plantamour, Director of the Observatory at Geneva.

STATIONS.	Barometer. Corrected for instrumental error and temperature. Inches.	Barometer. Corrected for instrumental error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Upper. 0—10.	Clouds. Amount. Lower. 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Geneva	28.98	736.1	30.46	773.6	38.1	3.4	52	WSW	.....	.....	1	.....	7	.....	.....	0	0	Vapory	The Observatory.
Zurich	28.72	729.4	30.41	772.3	38.8	3.8	56	S	.....	.....	1	.....	3	.....	.....	0	0	Bright	The Observatory.

Note.—For Geneva the corresponding departures from the normal values are: Barometer, +8.9 mm; Thermometer, +1.4 cent.; Relative Humidity, —25 per cent.

Note.—The rain-fall is measured at Zurich at 7 a. m. on the following day. The originals give the barometer corrected but not reduced to sea-level; the wind-force by the scale 0 to 4 for Zurich; the amount of cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The elevation of Geneva is 408 meters, or 1,339 feet, and that of Zurich 470 meters, or 1,542 feet.

TURKISH SERIES.

Furnished by the coöperation of A. Coumbary, Effendi, Director of the Central Observatory at Constantinople, and of Professor C. V. A. Van Dyck, Superintendent of the Lee Observatory at Beirut.

Constantinople	.....	.....	30.37	771.4	36.3	2.4	72	NNE	15	6.5	.....	.....	7	.....	NE	0	0	.....	
Fao, (Persian Gulf)	.....	.....	30.39	772.0	62.6	17.0	.....	SE	.....	.....	3	.....	5	.....	.....	.....	.....	.....	
Salonica	.....	.....	30.39	771.9	34.2	1.2	.....	NE	.....	.....	1	.....	2	.....	.....	.....	.....	.....	
Valona	.....	.....	30.15	765.7	53.1	11.7	.....	W	.....	.....	1	.....	0	.....	.....	.....	.....	.....	
Varna	.....	.....	30.35	771.0	25.7	— 3.5	.....	W	.....	.....	2	.....	5	.....	.....	.....	.....	.....	
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y	.....	.....	30.12	765.1	50.0	10.0	86	SE	.....	.....	3	.....	9n	.....	SE	1.10	27.9	Raining	Prof. C. V. A. Van Dyck

Note.—The originals give the wind-force by the scale 0 to 7, (except Beirut, by the scale 0 to 12, and Constantinople velocity in meters per second;) the weather in general terms as published; no distinction between upper and lower clouds, and, except Constantinople and Beirut, the amount by the scale 0 to 4. It is assumed that the barometer is reduced to sea-level.

CANADIAN SERIES.

Furnished by the coöperation of Professor G. T. Kingston, Director of the Magnetic Observatory at Toronto, and Superintendent of the Meteorological Office of the Dominion of Canada, and the respective Observers. Those marked with a star (*) are also telegraphed daily to the office of the Chief Signal Officer, U. S. Army.

Bathurst, N. B	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Hon. J. Ferguson.
Brockville, Ontario	.....	.....	30.39	771.9	— 8	—22.2	.....	Calm	0	0	.....	2c	0	N	.....	0	0	Fair	W. R. Bigg.
*Chatham, N. B	.....	.....	30.36	771.1	— 1	—18.3	100	Calm.	0	0	.....	2k	8ks	.....	.....	0.11	2.8	Cloudy	G. A. Blair.
Charlottetown, P. E. Island	.....	.....	30.33	770.4	0	—17.8	91	N	8	3.6	.....	5cs	0	.....	.....	0.30	7.6	Fair	H. J. Cundall, C. E.
Cornwall, Ontario	.....	.....	30.39	771.9	— 2.7	—19.3	100	N	.....	.....	1	0	1s	.....	.....	0	0	Fair	James Smith, M. A.
Dalhousie, N. B	.....	.....	.....	.....	.....	.....	.....	W	.....	.....	1	.....	.....	.....	.....	0.10	2.5	Clear	H. A. Johnson.
Esquimault, B. C	.....	.....	29.90	759.4	42.6	5.9	91	NE	.....	.....	.....	1ck	0	.....	.....	0	0	Clear	W. H. Bevis.
*Father Point, Quebec	.....	.....	30.38	771.6	— 5	—20.6	100	Calm	0	0	.....	5c	8s	.....	.....	Inap.	Inap.	Clearing	J. McWilliams.
Fredericton, N. B	.....	.....	30.42	772.7	— 4.6	—20.3	100	W	1	0.4	.....	7ks	0	W	.....	0.20	5.1	Fair	Prof. Harrison.
*Fort Garry, Manitoba	.....	.....	29.96	761.0	18	— 7.8	84	Calm	0	0	.....	2c	2s	W	.....	0	0	Fair	James Stewart.
Goderich, Ontario	.....	.....	30.27	768.8	25.1	— 3.8	88	S	.....	.....	2	9k	0	S	.....	0	0	Clearing	H. J. Strang, M. A.
Granton, Ontario	29.11	739.4	30.29	769.4	21.3	— 5.9	.....	SW	.....	.....	1	1cs	0	E	.....	0	0	Clear	James Grant.
*Halifax, N. S	.....	.....	30.25	768.3	6	—14.4	91	NW	15	6.7	.....	2cs	2ks	.....	.....	Inap.	Inap.	Fair	F. Allison, M. A.
Hamilton, Ontario	.....	.....	30.33	770.4	23.0	— 5.0	83	SW	.....	.....	1	9cs	0	W	.....	0	0	Cloudy	G. Dickson.
Heart's Content, N. F	.....	.....	29.99	761.7	15.0	— 9.4	100	NE	.....	.....	2	.....	10	.....	.....	0.14	3.6	Snowing	E. Weedon.
*Kingston, Ontario	.....	.....	30.42	772.7	6	—14.4	80	Calm	0	0	.....	10c	Sm'k	.....	.....	0	0	Fair	S. Woods, M. A.
*Montreal, Quebec	.....	.....	30.40	772.1	2	—16.7	77	E	8	3.6	.....	5cs	Haze	.....	.....	0.03	0.8	Fair	C. H. McLeod, C. E.
*Ottawa, Ontario	.....	.....	30.37	771.4	— 8	—22.2	88	N	4	1.8	.....	2cs	0?	N	.....	Inap.	Inap.	Cloudy?	J. B. Haney.
*Parry Sound, Ontario	.....	.....	30.27	768.8	15	— 9.4	82	S	8	3.6	.....	8k	2ks	S	S	0.01	0.3	Cloudy	Rev. R. Mosley.
Port Dover, Ontario	.....	.....	30.33	770.4	26	— 3.3	88	S	6	2.7	.....	10k	0	SW	.....	0	0	Cloudy	H. Morgan.
Port Hastings, N. S	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Peter Grant.
Port Stanley, Ontario	.....	.....	30.33	770.4	26	— 3.3	90	SE	4	1.8	.....	.....	10n	.....	.....	0	0	Cloudy	M. Payne.
*Quebec, Quebec	.....	.....	30.41	772.4	1	—17.2	71	Calm	0	0	.....	.....	10n	.....	.....	0.70	17.8	Cloudy	Capt. Ashe, R. N.
*Rockliffe, Ontario	.....	.....	30.35	770.9	— 7	—21.7	100	E	3	1.3	.....	5cs	0	N	.....	0	0	Fair	
St. John, N. B	.....	.....	30.42	772.7	4.0	—15.6	74	N	2	0.9	.....	0	0	.....	.....	0	0	Clear	G. Murdoch, C. E.
*Saugeen, Ontario	.....	.....	30.20	767.1	22	— 5.6	79	S	4	1.8	.....	.....	10s	.....	.....	0	0	Cloudy	K. Stewart.
Shoyner, Ontario	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	R. J. Cole.
Stratford, Ontario	28.93	734.8	30.30	769.6	23.5	— 4.7	92	SW	10	4.5	.....	.....	10s	.....	.....	0	0	Cloudy	C. J. MacGregor, M. A.
*Sydney, C. B	.....	.....	30.18	766.6	7	—13.9	93	N	16	7.2	.....	8k	8s	W	N	0.17	4.3	Cloudy	T. C. Hill.
*Toronto, Ontario	.....	.....	30.34	770.6	15	— 9.4	80	SW	3	1.3	.....	.....	10s	.....	W	0	0	Cloudy	Magnetic Observatory.
Woodstock, Ontario	.....	.....	30.33	770.4	22.6	— 5.2	94	S	3	1.3	.....	.....	10s	.....	.....	0	0	Cloudy	J. Montgomery.
Sub-Series.																			
St. Johns, Newfoundland	.....	.....	30.02	762.5	21.0	— 6.1	.....	W	.....	.....	.....	10ks	10s	.....	.....	0.10	2.5	Cloudy	John Delany.

Note.—The originals for Brockville, Charlottetown, Port Dover, Port Stanley, Stayner, St. Johns, N. F. and those telegraphed, give the amount of cloudiness by the scale 0 to 4. The elevation of Granton is 1,015 feet, or 309.4 m.; Stratford, 1,182 feet, or 360.3 m

UNITED STATES SERIES.

Furnished by the coöperation of Bvt. Brig. Gen. Albert J. Myer, Chief Signal Officer, U. S. Army.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain fall or melted snow in the past 24 hours. Inches	Rain fall or melted snow in the past 24 hours. Millimeters.	Weather	Observer.
Albany, N. Y.			30.43	772.9	11	—11.7	79	NW	3	1.3		0	0			0	0	Clear	
Alpena, Mich.			30.10	764.5	26	— 3.3	76	S	7	3.1			10s		S	0	0	Cloudy	
Atlantic City, N. J.			30.34	770.6	30	— 1.1	89	N	8	3.6		0	0			0	0	Clear	
Augusta, Ga.			30.38	771.6	37	2.8	85	NW	3	1.3		0	0			0	0	Clear	
Baltimore, Md.			30.35	770.9	37	2.8	62	N	2	0.9		2ck	8s	N	N	0	0	Cloudy	
Barnegat, N. J.			30.33	770.4	31	— 0.6	79	N	14	6.3		0	0			0	0	Clear	
Bismarck, Dakota	28.27	718.0	30.02	762.5	19	— 7.2	70	Calm	0	0		0	0			0	0	Clear	
Boston, Mass.			30.37	771.4	12	—11.1	61	N	8	3.6		0	2s		W	0	0	Fair	
Breckenridge, Minn.			30.05	763.3	20	— 6.7	70	W	12	5.4		0	0			0	0	Clear	
Buffalo, N. Y.			30.31	769.9	25	— 3.9	75	Calm	0	0			10s			0	0	Cloudy	
Burlington, Vt.			30.41	772.4	3	—16.1	59	Calm	0	0		2c	0			0.03	0.8	Fair	
Cairo, Ill.			30.42	772.7	30	— 1.1	78	Calm	0	0		2cs	Fog			0	0	Fair	
Cape Hatteras, N. C.			30.20	767.1	42	5.6	75	N	20	8.9		0	Haze			0	0	Clear	
Cape Henry, Va.			30.33	770.4	37	2.8	71	N	16	7.2		0	0			0	0	Clear	
Cape Lookout, N. C.			30.29	769.4	40	4.4	82	N	26	11.6		0	0			0.02	0.5	Clear	
Cape May, N. J.			30.33	770.4	31	— 0.6	68	N	12	5.4		0	0			0	0	Clear	
Charleston, S. C.			30.31	769.9	45	7.2	68	NW	9	4.0		0	0			0	0	Clear	
Cheyenne, Wyoming	24.13	612.9	30.07	763.8	21	— 6.1	72	NW	8	3.6		0	0			0	0	Clear	
Chicago, Ill.			30.24	768.1	27	— 2.8	77	SW	12	5.4		0	0			0	0	Clear	
Cincinnati, Ohio			30.34	770.6	30	— 1.1	78	NW	2	0.9		1c	Fog	NE		0	0	Clear	
Cleveland, Ohio			30.36	771.1	23	— 5.0	86	S	7	3.1		2c	8s			0	0	Fair	
Corsicana, Tex.			30.41	772.4	40	4.4	91	Calm	0	0		5ck	Fog			0	0	Fair	
Davenport, Iowa			30.32	770.1	22	— 5.6	85	W	1	0.4		0	0			0	0	Clear	
Denison, Tex.			30.45	773.4	38	3.3	71	N	4	1.8		0	0			0	0	Clear	
Denver, Col.	24.94	633.5	30.16	766.1	19	— 7.2	69	S	5	2.2		0	0			0	0	Clear	
Detroit, Mich.			30.28	769.1	21	— 6.1	85	SW	4	1.8		5cs	0	SW		0	0	Fair	
Dodge City, Kan.	27.68	703.1	30.17	766.3	21	— 6.1	71	W	2	0.9		0	2s		W	0	0	Clear	
Dubuque, Iowa			30.25	768.3	15	— 9.4	82	Calm	0	0		2cs	Haze			0	0	Fair	
Duluth, Minn.			29.89	759.2	31	— 0.6	78	W	8	3.6		5c	0	W		0	0	Fair	
Eastport, Me.			30.34	770.6	8	—13.3	66	N	20	8.9		0	0			0.02	0.5	Clear	
Erie, Pa.			30.32	770.1	32	0.0	79	S	8	3.6			10s			0	0	Cloudy	
Escanaba, Mich.			29.96	761.0	23.5	— 4.7	80	S	12	5.4		8cs	0	NW		0	0	Cloudy	
Fort Gibson, Indian Ter.			30.41	772.4	25	— 3.9	75	E	1	0.4		0	0			0	0	Clear	
Ft. St. Michael, Alaska																			
Fort Sill, Indian Ter.	29.17	740.9	30.36	771.1	32	0.0	48	N	7	3.1		1c	0	W		0	0	Clear	
Fort Sully, Dakota	28.39	721.1	30.15	766.6	18	— 7.8	84	Calm	0	0		0	0			0	0	Clear	
Florence, Arizona	28.54	724.9	30.00	762.5	57	13.9		SW				5c	0			0	0	Fair	
Galveston, Tex.			30.46	773.4	50	10.0	93	N	3	1.3		2c	0			0	0	Fair	
Grand Haven, Mich.			30.21	767.3	33	0.6	84	S	14	6.3			10s			0	0	Cloudy	
Indianapolis, Ind.			30.37	771.4	28	— 2.2	88	W	1	0.4		0	Sm'k			0	0	Clear	
Indianola, Tex.			30.44	773.2	51	10.6	100	E	4	1.8		0	5s			0	0	Fair	
Jacksonville, Fla.			30.30	769.6	44	6.7	75	NW	6	2.7		0	0			0	0	Clear	
Keokuk, Iowa			30.30	769.6	31	— 0.6	79	W	5	2.2		0	0			0	0	Clear	
Key West, Fla.			30.21	767.3	61	16.1	83	NE	20	8.9		5cs	0			0	0	Fair	
Kittyhawk, N. C.			30.31	769.9	39	3.9	81	N	32	14.3		0	Haze			0	0	Clear	
Knoxville, Tenn.			30.42	772.7	27	— 2.8	88	Calm	0	0		0	0			0	0	Clear	
La Crosse, Wis.			30.16	765.8	23	— 5.6	60	S	16	7.2		0	0			0	0	Clear	
Leavenworth, Kan.			30.37	771.4	27	— 2.8	88	S	1	0.4		0	0			0	0	Clear	
Louisville, Ky.			30.39	771.9	32	0.0	90	Calm	0	0			Fog			0	0	Foggy	
Lynchburg, Va.			30.40	772.1	31	— 0.6	89	Calm	0	0		0	0			0	0	Clear	
Malone, N. Y.			30.36	771.1	8	—13.3	78	SE	6	2.7		2cs	0	N		0.22	5.6	Fair	
Marquette, Mich.			29.87	758.7	34	1.1	61	SE	4	1.8		0	0			0	0	Clear	
Memphis, Tenn.			30.43	772.9	34	1.1	79	SW	2	0.9		0	Fg'sm		SW	0	0	Clear	
Milwaukee, Wis.			30.20	767.1	24	— 4.4	74	SW	14	6.3		2c	0			0	0	Clear	
Mobile, Ala.			30.42	772.7	39	3.9	72	N	5	2.2		0	0			0	0	Clear	
Montgomery, Ala.			30.40	772.1	38.5	3.6	81	Calm	0	0		0	Sm'k			0	0	Clear	
Morgantown, W. Va.	29.27	743.4	30.41	772.4	26	— 3.3	76	Calm	0	0		0	Haz.			0	0	Clear	
Mt. Washington, N. H.	23.56	598.4	29.82	760 0	2	—16.7	72	NW	16	7.2		0	0			0.06	1.5	Clear	
Nashville, Tenn.			30.40	772.1	30	— 1.1	89	Calm	0	0		0	Fog			0	0	Clear	
New Haven, Conn.			30.37	771.4	24	— 4.4	60	N	10	4.5		Haze	0			0	0	Clear	
New London, Conn.			30.36	771.1	26	— 3.3	76	N	6	2.7		0	0			0	0	Clear	
New Orleans, La.			30.41	772.4	48	8.9	81	N	4	1.8		5c	Sm'k	W		0	0	Fair	
Newport, R. I.			30.35	770.9	22	— 5.6	72	N	10	4.5		0	0			0	0	Clear	
New York, N. Y.			30.37	771.4	29	— 1.7	67	N	9	4.0		0	Sm'k			0	0	Clear	
Norfolk, Va.			30.34	770.6	34.7	1.4	79	NE	8	3.6		0	0			0	0	Clear	
North Platte, Neb.	27.24	691.9	30.09	764.3	6	—14.4	88	W	5	2.2		0	0			0	0	Clear	
Omaha, Neb.	29.10	739.1	30.24	768.1	30	— 1.1	78	SW	4	1.8		0	0			0	0	Clear	
Oswego, N. Y.			30.35	771.6	9.6	—12.6	80	SE	4	1.8		8cs	1s			0	0	Fair	
Pembina, Dakota			29.89	759.2	25	— 3.9	94	SW	8	3.6		5c	0			0	0	Fair	
Philadelphia, Pa.			30.38	771.6	31	— 0.6	68	NE	10	4.5		0	Sm'k			0	0	Clear	
Pike's Peak, Col.	17.80	452.1	30.00	762.0	8	—13.3	55	W	20	8.9		0	0			0	0	Clear	
Pittsburgh, Pa.			30.36	771.1	31	— 0.6	79	SW	4	1.8			10s		SW	0	0	Cloudy	
Port Huron, Mich.			30.27	768.8	23	— 5.0	86	S	7	3.1			10s			0	0	Cloudy	
Portland, Me.			30.38	771.6	10	—12.2	79	N	7	3.1		0	0			Inap.	Inap.	Clear	
Portland, Oregon			29.83	757.7	39	3.9	66	NW	8	3.6		5c	0			0	0	Fair	
Punta Rassa, Fla.			30.25	768.3	59.5	13.6	83	NE	13	5.8		Haze	Sm'e			0	0	Hazy	
Rochester, N. Y.			30.34	770.6	22	— 5.6	79	S	6	2.7			10s		W	0	0	Cloudy	
Salt Lake City, Utah	25.81	655.6	30.14	765.5	12	—11.1	79	NE	4	1.8		0	0			0	0	Clear	
Sandy Hook, N. J.			30.31	769.9	30	— 1.1	59	NE	20	8.9		0	0			0	0	Clear	
San Diego, Cal.			30.06	763.5	55	12.8	79	E	4	1.8			10s		E	0	0	Cloudy	
San Francisco, Cal.			29.75	755.6	54	12.2	79	SE	4	1.8			10n			0.07	1.8	Light rain	
Santa Fé, N. M.	23.43	595.1	29.97	761.2	32	0.0	34	NE	4	1.8		2c	2s			0	0	Fair	
Savannah, Ga.			30.34	770.6	42	5.6	75	N	11	4.9		0	0			0	0	Clear	
Shreveport, La.			30.49	774.4	37	2.8	90	Calm	0	0		0	Sm'k			0	0	Clear	
Smithville, N. C.			30.31	769.9	42	5.6	88	NE	10	4.5		0	0			0	0	Clear	
Springfield, Mass.			30.30	771.9	21	— 6.1	70	N	1	0.4		0	0			0	0	Clear	
St. Louis, Mo.			30.40	772.1	33	0.6	70	NW	4	1.8		0	0			0	0	Clear	
St. Marks, Fla.			30.15	770.9	39	3.9	81	N	4	1.8		0	0			0	0	Clear	
St. Paul, Minn.			30.04	763.0	24	— 4.4	87	S	1	0.4		0	0			0	0	Clear	
St. Paul's Island, Alaska																			
Thatcher's Island, Mass.			30.37	771.4	21	— 6.1	67	NE	24	10.7		5k	0	NE		0	0	Fair	
Toledo, Ohio			30.30	769.6	27	— 2.8	77	S	6	2.7		5c	Haz.			0	0	Fair	
Tucson, Arizona	27.67	702.8	30.22	767.6	42	5.6		S				2k	0	SW		0	0	Fair	
Tybee Island, Ga.			30.29	769.4	45	7.2	75	NE	20	8.9		0	0			0	0	Clear	
Vicksburg, Miss.			30.48	774.2	37	2.8	90	Calm	0	0		0	Sm'k		W	0	0	Clear	
Virginia City, M. T.	24.37	619.0	29.80	758.2	17	— 8.3	67	Calm	0	0		0	0			0	0	Clear	
Washington, D. C.			30.38	771.6	29.7	— 1.4	79	N	4	1.8		2c	1s	NW	N	0	0	Smoky	
Wilmington, N. C.			30.3	769.9	40	4.4	63	N	6	2.7		0	0			0	0	Clear	

UNITED STATES SERIES.—CONTINUED.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Upper. 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Wood's Holl, Mass.	.....	.....	30.35	770.9	28	— 2.2	57	NE	4	1.8	.....	.....	10s	.....	NE	0	0	Cloudy	
Yankton, Dakota	28.86	733.0	30.24	768.1	20	— 6.7	70	N	1	0.4	.....	0	0	.....	.....	0	0	Clear	
Yuma, Arizona	.....	.....	30.10	764.5	51	10.6	.....	NE	.....	.....	.....	5cs	0	W	.....	0	0	Fair	
Sub-Series.																			
Kingston, Jamaica, W. I.	.....	.....	30.25	768.3	73	22.8	81	Calm	0	0	.....	2c	2s	.....	.....	0	0	.....	James Gall.
Navassa, W. I.	.....	.....	.....	.....	77	25.0	.....	S	.....	.....	1	.....	.....	.....	.....	0	0	Clear	F. M. Everett.
Clifton, Ja., W. I.	27.26	692.4	30.06	763 5	65	18.3	89	E	1.0	0.4	.....	2c	5k	NE	.....	0.86	21.8	Fine	C. Partridge.
Paramaribo, D. Guiana, S.A	.....	.....	30.05	763.3	80	26.7	82	SE	.....	.....	2	4ck	5k	E	.....	0	0	Fair	C. J. Hering.
Batavia, Dutch Guiana, S.A.	30.07	763.8	.....	.....	76 6	24.8	.....	N	.....	.....	.....	.....	.....	.....	.....	0	0	Cloudy	Dr. H. Groot.
Medellin, Colombia, S. A.	25.27	641 8	.....	.....	62 5	16.9	86	Calm	.....	.....	0	5cs,k	0	.....	.....	0.17	4.3	Fair	Thomas Herran.
York Factory, B. A.	.....	.....	29.84	757.9	4.0	—15.6	87	E	8	3.6	.....	.....	10s	.....	.....	0	0	Gloomy	J. Fortescue, W. Wood
Honolulu, Oahu, H. I.	.....	.....	30.02	762.5	70	21.1	95	SSW	.....	.....	4	.....	.....	.....	.....	0	0	Cloudy	Daniel Smith.
Makawao, Maui, H. I.	.....	.....	29.80	756.9	69	20.6	76	S	.....	.....	2	0	3k	.....	.....	0	0	.....	F. L. Clarke.

NOTE.—The originals give the amount of cloudiness by the scale 0 to 4, except York Factory, Makawao, Medellin and Paramaribo. The elevation of the barometer at Bismarck is 1,677 feet, or 511.1 meters; Cheyenne, 5,057.3 ft., or 1,846.2 m.; Clifton, about 2,892 ft., or 881.5 m.; Denver, 5,135 ft., or 1,565.2 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Florence, 1,560 (?) ft., or 475.5 (?) m.; Makawao, 2,205 ft., or 672.1 m.; Morgantown, 1,027.9 ft., or 313.3 m.; Medellin, 4,876 ft., or 1,486.2 m.; Mt. Washington, 6,285 ft., or 1,915.6 m.; North Platte, 2,848 ft., or 867.4 m.; Omaha, 1,054.6 ft., or 321.4 m.; Pike's Peak, 14,150.7 ft., or 4,313.1 m.; Salt Lake City, 4,362.2 ft., or 1,329.6 m.; Santa Fe, 6,862.2 (?) ft., or 2,091.6 (?) m.; Tucson, 2,513 (?) ft., or 772.1 (?) m.; Virginia City, 5,480 (?) ft., or 1,670.3 (?) m.; Yankton, 1,278 ft., or 389.5 m. The following constants are added in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Denver, 5.22 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 16.21 in.; Salt Lake City, 4.33 in.; Santa Fe, 6.84 in.; Tucson, 2.59 in.; Virginia City, 5.48 in. The elevation of Batavia is about 6 feet; the barometric readings need the addition of 0.2 mm. or 0.01 in. for reduction to sea-level.

UNITED STATES NAVAL SERIES.

By authority of the **SECRETARY OF THE NAVY.**

Furnished by the coöperation of the Navy Department, through Commodore Daniel Ammen, U. S. N., Chief of Bureau of Navigation.

STATIONS AND VESSELS.	True course toward—	Hourly rate in knots.	*Barometer as reported.		Temperature of the Air.		Relative Humidity.	Wind.				Clouds.				Rain-fall or melted snow in the past 24 hours.		State of Ocean.	Direction of swell from—	Weather.	Observer.
								Direction.	Velocity		Force.	Amount.		Direction.							
												Up'er	Low'r	Up'er	Low'r						
			Inches.	Millimeters.	Fahrenheit.	Centigrade.	Per cent.	From—	Miles per hour.	Meters per second.	0—10.	0—10.	0—10.	From—	From—	Inches.	Millimeters.				
Naval Academy, Annapolis, Md.			29.96	761.0	33	0.6	74	NNW			2		6			0	0			Cloudy	
Naval Hospital, Annapolis, Md.			30.33	770.4	31	— 0.6	68	N			1		4		N	0	0				
Navy Yard, Mare Island, Cal.			29.99	761.7	53	11.7	100	SE			1		10			0.425	10.80			Rainy	
Navy Yard, Norfolk, Va.			30.44†	773.2†	35	1.7		NNE			5		0							Blue sky	
Navy Yard, Pensacola, Fla.			30.40	772.1	41	5.0	91	NNW			1		1			0	0			‡D. clouds	
Navy Yard, Portsmouth, N.H.			30.35	770.9	9	—12.8		NNW			2				S&E					Clear	
Adams, Port Royal, S. C.			30.35	770 9	51	10.(	86	N			4–5		0							Blue sky	
Ajax, Port Royal, S. C.			30.25	768.3	47	8.3		NE			3		0							Pleasant	
Canonicus, New Orleans, La.			30.08†	764.0†	47	8.3	85	SW			3		2		W					Light mist	
Catskill, Port Royal, S. C.			30.25†	768.3†	48	8.6		N			4		0					Chop'ed		Fair	
Colorado, New York, N. Y.			30.30	769.6	29	— 1.7		N			1		0			0	0			Blue sky	
Dictator, Port Royal, S. C.			30.35	770.9	45	7.2	92	N			4		0			0	0			Clear	
Essex, Norfolk, Va.			30.34	770.6	39	3.9	100	N			3		0							Blue sky	
Hartford, Hampton Roads, Va.			30.43	772.9	32	0.0		N			3		1			0	0			Pleasant	
Huron, Port Royal, S. C.			30.38	771.6	48	8.9	85	N			4									Blue sky	
Lehigh, Port Royal, S. C.			30.15†	765.8†	47	8.3	77	SE			1		0							Pleasant	
Manhattan, Port Royal, S. C.			30.32†	770.1†	47	8.3		NNE			4		0					Smooth		Blue sky	
Michigan, Erie, Pa.			30.15	765.8	33	0.6	89	SW			1		10							Cloudy	
Monongahela, Baltimore, Md.			30.33	770.4	36	2.2		NNE			2		c,k		S&W					‡D. clouds	
New Hampshire, Port Royal, S. C.			30.46	774.2	46	7.8	92	NNE			3		0					Smooth		Blue sky	
Omaha, Panama			30.10	764.5	75	23.(	90	NNW			2		2		SSE	0	0	Smooth		Pleasant	
Ossipee, New Orleans, La.			30.46	773.7	45	7.3		Calm			0		2							Hazy	
Pensacola, Panama			30.04	763.0	76	24.4	91	NNW			1		2							‡D. clouds	
Plymouth, Pensacola, Fla.			30.44	773.2	52	11.1	86	N			2		0			0	0	Smooth		Hazy	
¶ Rio Bravo, Matamoras, Mex.			29.95	761.5	60	15.(	88	E			2		7		SE					‡D. clouds	
Santee, Annapolis, Md.			29.90	759.4	33	0.6		NNW			2		6							Cloudy	
St. Louis, League Island, Pa.			30.18	766.6	33.(	0.8		N			2		1		SW	0	0			Fair	
Tallapoosa, Washington, D. C.			30.25	768.3	28	— 2.2	100	Calm			0		3		S					‡D. clouds	
Wabash, Boston, Mass.			30.38	771.6	16	— 8.9		NNW			1		2		SSE					‡D. clouds	
Wyoming, Washington, D. C.			30.46	773.7†	27	— 2.8		Calm			0		7							‡D. clouds	

* It is not known that the barometer is corrected for temperature, instrumental error or elevation. † Aneroid Barometer. ‡ Detached clouds. ¶ Barometer corrected for instrumental error and reduced to sea-level.

UNITED STATES MARINE SERIES.

REPORTED TO THE OFFICE OF THE CHIEF SIGNAL OFFICER OF THE ARMY.

NAMES OF VESSELS.	True course toward—	Hourly rate in knots.	Barometer reduced to sea-level.		Temperature of the Air.		Relative Humidity.	Wind.				Clouds.				State of Ocean.	Direction of swell from—	Weather.	OBSERVER.
								Direction.	Velocity.		Force.	Amount.		Direction.					
												Up'er	Low'r	Upper.	Lower.				
			Inches.	Millimeters.	Fahrenheit.	Centigrade.	Per cent.	From—	Miles per hour.	Meters per second.	0—10.	0—10.	0—10.	From—	From—				
PACIFIC MAIL S. S. CO. MARINE SERIES.																			
Furnished by the coöperation of ————, President; Williams, Blanchard & Co., Agents.																			
S. S. City of Peking																			Lt. Z. L. Tanner, U.S.N
OCCIDENTAL AND ORIENTAL S. S. CO. MARINE SERIES.																			
Furnished by the coöperation of George H. Bradbury, President; T. H. Goodman, Agent.																			
S. S. Belgic																			Capt. John Metcalf.
S. S. Gaelic																			Capt. W. H. Kidley.
S. S. Oceanic																			Capt. H. Parsell.
NORTH GERMAN LLOYD OF BREMEN MARINE SERIES.																			
Furnished by the coöperation of A. Schumacher & Co., Agents.																			
S. S. Baltimore																			Capt. H. Andressen.
S. S. Berlin																			Capt. C. Pohle.
S. S. Braunschweig																			Capt. K. Undütsch.
S. S. Nürnberg																			Capt. A. Jaeger.
S. S. Ohio																			Capt. G. Meyer.
MARINE SERIES. (Miscellaneous.)																			
Furnished by the coöperation of Captain James Jorgensen.																			
Schooner Addie Fuller, at Brunswick, Ga			30.24	768.1	51	10.6	72	N	11	4.9		0	0					Clear	Capt. James Jorgensen.

NOTE.—The schooner Addie Fuller gives the amount of cloudiness by the scale 0 to 4.

COLLATED AT THE OFFICE OF THE CHIEF SIGNAL OFFICER OF THE ARMY, WASHINGTON, D. C.

The records which appear in this Bulletin are copied from the regular exchanges of this office, made in each instance in compliance with an especial request and are published for the uses of the coöperating observers. The barometric readings in the first two columns are reduced to freezing and their respective standards; those in the second two also to mean sea-level. The "weather" is generally published as given.

When the distinction between the upper and lower strata of clouds is not reported, the *kinds* or *types*, viz: cirrus, cumulus, stratus, nimbus, scud, fracto, palito, haze, fog and smoke, as indicated, respectively, by the letters c, k, s, n, d, f, p, hz., fg. and sm'e, are generally published with the amount in the lower-cloud column. The distinction between the upper and lower strata is carefully made in the United States Series and a portion of the Canadian Series, and the types are indicated by the above letters or their combinations in the proper column.

Albert J. Myer

Brig. Gen. (Bvt. Assg'd.) Chief Signal Officer, U. S. A

BULLETIN

OF

INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON JANUARY 29, 1877.

7:35 A. M. WASHINGTON mean time.

6:7 A. M. MEXICO mean time.
7:7 A. M. SAN JOSE mean time.
0:6 P. M. LISBON mean time.
0:28 P. M. MADRID mean time.
0:43 P. M. GREENWICH mean time.
0:53 P. M. PARIS mean time.
1:1 P. M. BRUSSELS mean time.
1:4 P. M. UTRECHT mean time.
1:13 P. M. BERNE mean time.

1:26 P. M. CHRISTIANIA mean time.
1:33 P. M. COPENHAGEN mean time.
1:33 P. M. ROME mean time.
1:37 P. M. BERLIN mean time.
1:49 P. M. VIENNA mean time.
1:55 P. M. STOCKHOLM mean time.
2:18 P. M. ATHENS mean time.
2:30 P. M. CONSTANTINOPLE mean time.
2:44 P. M. ST. PETERSBURG mean time.

10:2 P. M. TOKEI mean time.

ALGERIAN SERIES.

Furnished by the coöperation of General d'Eudeville, Commandant Supérieur du Génie in Algeria.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Nemours	.....	.....	30.51	775.0	61.3	16.3	45	WNW	.....	.....	1	.....	0	.....	.....	0	0	Clear	Charnot.
Algiers	.....	.....	30.48	774.3	62.7	11.5	.....	W	.....	.....	3	.....	3	.....	.....	0	0	Fair	Peter.
La Calle	.....	.....	30.33	770.4	56.7	13.7	73	NNW	.....	.....	4	.....	6	.....	.....	0.118	3.0	Fair	Fleury.
Tunis	.....	.....	30.18	766.5	53.6	12.0	.....	NE	.....	.....	6	.....	7	.....	.....	0.055	1 4	Cloudy	Jacques.
Sfax	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Saida	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Tebessa	.....	.....	30.45	773.4	56.1	13.4	44	WSW	.....	.....	1	.....	1	.....	.....	0	0	Clear	Millot.
Gerlville	.....	.....	30.25	768.4	38.3	3.5	.....	N	.....	.....	3	.....	2	.....	.....	0.748	19.0	Clear	Bourgeois.
Laghouat	.....	.....	30.31	769.8	51.8	11.0	6	N	.....	.....	4	.....	0	.....	.....	0	0	Clear	Lemaillot.
Biskra	.....	.....	30.32	770.1	56.3	13.5	30	N	.....	.....	2	.....	1	.....	.....	0	0	Clear	Guyot.
.....	.....	.....	30.34	770.5	66.2	19.0	16	NW	.....	.....	4	.....	5	.....	.....	0	0	Fair	Kuntz.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—In the originals the distinction between the amount of upper and lower clouds is apparently not made. The weather is published as given. The rain-fall is measured at 7 a. m., local time.

AUSTRIAN SERIES.

Furnished by the cooperation of Professor Ferdinand Osnaghi, Director of the Imperial and Royal Central Meteorological Institute at Vienna.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Agram	.....	.....	30.04	763.0	30.0	— 1.1	84	SW	.....	.....	1	.....	10	.....	.....	0.185	4.7	Snowing	Prof. Ivan Stozir.
Cracow, I. R. Observatory	.....	.....	29.89	759.2	34.5	1.4	98	W	.....	.....	1	.....	10	.....	.....	0.043	1.1	.....	Dr. Wierzbiski.
Eperies	.....	.....	30.02	762.5	29.8	— 1.2	76	S	.....	.....	4	.....	10k,s	.....	.....	0	0	.....	Julius Mikolik.
Gratz	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Hermannstadt	28.70	728.9	30.01	762.3	30.4	— 0.9	80	S	.....	.....	1	.....	10	.....	.....	0	0	.....	Andreas Rospini.
Kremsmünster	28.58	725.8	30.08	764.0	27 7	— 2.4	75	SE	.....	.....	3	.....	0	.....	.....	0	0	.....	Prof. Reissenberger
Lemberg	28.60	726.4	29.90	761.7	36.0	2.2	89	W	.....	.....	3	.....	10	.....	.....	0.354	9.0	.....	Prof. C. Wagner.
Nyiregyhaza	.....	.....	30.00	761.9	23 0	— 5.0	93	E	.....	.....	1	.....	2	.....	.....	0.016	0.4	.....	Dr. T. Stanecki.
Pola	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Habzsuda Daniel.
Szegedin	.....	.....	29.96	761.0	45.5	7.5	76	WNW	.....	.....	1	.....	10ks	.....	.....	0	0	.....	I.R.Hydrographic Office.
Trieste	.....	.....	30.08	764.0	32.4	0.2	85	S	.....	.....	3	.....	6	.....	.....	0	0	.....	Karl Stancel.
Vienna	.....	.....	30.02	762.5	42.3	5.7	54	ENE	.....	.....	1	.....	10	.....	.....	0.457	11.6	Raining	Prof. V. Farolfi.
.....	.....	.....	29.93	760.3	33.4	0.8	92	E	.....	.....	1	.....	10	.....	.....	0.224	5.7	.....	I. R. Central Met. Obs'y.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
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.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 7 p. m., local time. The elevation of Gratz is 343.5 meters, or 1,126.9 feet: Hermannstadt, 407.8 meters, or 1,337.9 feet; Kremsmünster, 383.6 meters, or 1,258.5 feet.

BELGIAN SERIES.

Furnished by the coöperation of J. C. Houzeau, Director of the Royal Observatory at Brussels.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Arlon	.....	.....	30.29	769.3	36.3	2.4	75	NW	.....	.....	2	.....	5	.....	.....	0.370	9.4	.....	Royal Observatory.
Brussels	.....	.....	30.18	766.5	41.9	5.5	65	W	.....	.....	4	.....	7k,s	.....	WNW	0.187	4.7	.....	
Furnes	.....	.....	30.14	765 4	43.2	6.2	99	WNW	.....	.....	5	.....	7	.....	.....	0.067	1.7	.....	
Maeseyck	.....	.....	30.10	764.6	41.2	5.1	83	W	.....	.....	5	.....	8	.....	.....	0.228	5.8	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—In the originals, the weather is occasionally given in general notes.

BRITISH SERIES

Furnished by the coöperation of Robert H. Scott, Esq., Director of the Meteorological Office, London, Alexander Buchan, Secretary of the Scottish Meteorological Society, Edinburgh, and the respective Observers.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Aberdeen			29.46	748.3	37.2	2.9		SW	25	11.2			1			0.01	0.25	Blue sky	William Boswell.
Ardrossan			29.63	752.6	43	6.1		W			6		7			Haul	Haul	Squally	William McNeil.
Armagh, Observatory			29.78	756.4	35.4	1.9		SW	6	2.7			10					Raining	S. Call, for Dr. Robinson.
Birr Castle, (Parsonstown)			29.94	760.5	48.0	8.9		WSW			5–6		10					Raining	J. Dreyer.
Bradford			29.84	757.9	37.7	3.2		SW			3		10			0.19	4.8	Raining	J. McLandsborough.
Bridgetown, (Barbados)			30.02	762.5	80.0	26.7		NE			2		6					*D. clouds	Sergt. J. F. Halanen, A.
Cambridge, Observatory			30.07	763.8	42.0	5.6		WSW			4		10					Overcast	H. Todd. [H. C.
Cardington			30.07	763.8	42.0	5.6		W			3		10					Overcast	Jol n McLaren.
Carlisle																			T. Bell, for J. Cartmell.
Chatham, School M. E.			30.21	767.3	44.2	6.8		SW			3		3					Blue sky	Maj. C. N. Martin, R.E.
Dartmoor	28.76	730.5	30.21	767.3	42.0	5.6		SW			7		10					Raining	R. E. Power.
Davos Platz, (Switzerland)	24.87	631.7			20.2	— 6.6	75	NE			2		10			1.00	26.9	Snowing	Francis Redford, M. A.
Donaghadee			29.76	755.9	37	2.8		WSW			4		10					Overcast	J. Mac Gowan.
Dover			30.17	766.3	44	6.7		W			5		4					⅜ clouded	J. Costello.
Eccles, (near Manchester)			29.99	761.7	39.7	4.3		SW	11.0	4.9			10					Raining	Thomas Mackereth.
Falmouth, Observatory			30.33	770.4	49.2	9.6		W			6		9					Overcast	The Staff.
Fort Napier, (Natal)	27.71	703.8	29.95	760 7	70.0	21.1		E			2		10					Overcast	P'vt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.90	759.4	85	29.4		NE			1		3					*D. clouds	
Galway, Queen's College			29.84	757.9	47	8.3		SW			8		10					Raining	Prof. A. H. Curtis.
Gibraltar, (Mediterranean)			30.48	774.2	61.4	16.3		E			1		1					Blue sky	Corpl. C. Aitken, A.H.C.
Glasgow, Observatory			29.60	751.8	35.1	1.7		W			2		10					Rain & snow	Lewis Stuart.
Great Yarmouth			30.02	762.5	39	3.8		W			5		5					Misty	G. T. Watson.
Greenwich, Royal Obs'y			30.15	765.8	43.3	6.3		WSW			4		10					Overcast	The Staff, for G. B. Airy.
Guernsey			30.38	771 6	49.5	9.7		WNW			5		5					Squally	Dr. S. E. Hoskins.
Helston			30.36	771.1	50	10.0		S			7		6k			0.10	2.5	Fair	M. P. Moyle.
Holyhead			29.83	757.7	47	8.3		W			6		10					Raining	John Tilston.
Kew, Observatory			30.16	766.1	43.6	6.4		WSW	17	7.6			9					Hazy	The Staff.
Kingstown			29.81	757.9	47	8.3		W			6		10					Raining	George Mitchell.
Leicester Museum			30.00	762.0	39.9	4.4		W			1		10					Raining	Wm. J. Harrison, F.G.S.
Malta, (Mediterranean)			30.08	764.0	57.0	13.9		N			3		10k					*D. clouds	Corp'l. P. Bravis, A.H.C.
Nairn			29.41	747.0	35	1.7		WSW			2		10					Overcast	W. D. Penny.
Nassau, (Bahamas)			30.29	767.1	69.8	21.0		NE			1		2					*D. clouds	Surg. Maj. Henry.
Nottingham, Observatory			29.95	760.7	38.8	3.8		SW			6		10n		SW	0.41	10.44	Overcast	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			30.00	762.0	38.2	3.5		SW			4		10					Raining	Rev. Stephen Whitty.
Oxford, Radcliff's Obs'y			30.11	764.8	44	6.7		SW			3		10					Drizzling	J. Lucas.
Plymouth			30.30	769.6	48.1	8.9		W			5		10					Overcast	John Merrifield.
Roche's Point			30.13	765.3	50	10.0		WNW			6		8					Showery	W. Kennedy.
Saint Ann's Head			30.05	763.3	49	9.4		W			8		7					*D. clouds	John C. Walker.
Saint Helier, (Jersey)			30.38	771.6	51.2	10.7		W			6		5					⅜ clouded	A. P. Amy.
Sandwick Manse, (Orkneys)			29.17	740.9	41.2	5.1		W	40	17.9			3					Showery	Rev. C. Clouston, LL. D.
Scarborough																			F. Shaw.
Scutari Cemetery, (Turkey)			30.11	764.8	39.0	2.2		NE			2		9					Snowing	Sergt. W. H. Lyne.
Sheffield			29.88	758.9	37.6	3.1		WSW			4		10			0.67	17.2	Raining	W. F. Cooper.
Silloth Rectory			29.71	754.6	41.8	5.4	84	SW			6		7			0.30	7.6	*D. clouds	Rev. Francis Redford.
Stonyhurst, Observatory			29.85	758.2	38.5	3.6		NW			5		10					Raining	Rev. S. J. Perry.
Stornoway, Lews C., (Hebr.)			29.33	745.0	37	2.8		WNW			6		10					Overcast	John Smith.
Stratfield. Turgiss			30.20	767.1	43.3	6.3		W			3		10					Raining	Rev. Charles H. Griffith.
Thurso			29.25	742.9	38	3.3		SW			6		8					Showery	John Trotter.
Truro, Royal Institution			30.31	769.6	51	10.6		W			8		10					Raining	W. Newcombe.
Valencia, Observatory			30.14	765.5	50.0	10.0		W	40	17.9			10					Squally	The Staff.
SUB-SERIES.																			
Calf of Man, (Isle of Man)					42	5.6		W			7		10			0	0		Henry Mercer.
Cape Good Hope, Obs'y			29.78	756.4	68.2	36.8	27	S	7	3.1		0	1						The Staff, for E. J. Stone.
Hobart Town, (Tasmania)			29.61	752.1	70.0	21.1	94	S			1		10k			0	0	Covered	Francis Abbott, F.R.A.S.
Leith, Restalrig Park			29.60	751.8	35.8	2.1		W			4		10n			0.41	10.4	Stormy	Andrew Gibb.
Mauritius, Observatory			29.81	757.2	78.0	25.6	88	ENE	10.5	4.7		10	6			1.93	49.0	Drizzling	C. Meldrum.
Melbourne, Observatory			29.85	758.2	66.2	19.0	75	SSW	5	2.2			3			0	0	Fine	R. L. J. Ellery.
Monach L't-house, (Hebrides)			29.35	745.5	40	4.4		W			8		10			0.2	5.1		J. Youngclause.
North Unst, (Shetland Is.)			28.86	733.0	38	3.3		W			9	3	5			Blank	Blank		Robert Burnet.

NOTE.—Generally, the originals do not give the relative humidity, rain-fall, or distinction between upper and lower clouds. The originals give the wind direction to 32 points and weather by the Beaufort notation. The originals give the barometer for Aberdeen, Cardington, Galway, Oxford, St. Helier, Sandwick, Scarborough, Stonyhurst, Leith, Monach and North Unst as read off and the amount of cloudiness for Stornoway by the scale 0 to 4. The wind-force is given by the scale 0 to 12 in the official series; 0 to 6 in the sub-series; except in lbs. per square foot for Greenwich and Hobart Town. The rain-fall is measured at Aberdeen at 10 a. m.; Bradford, 9 a. m.; Hobart Town, 7:30 a. m.; Nottingham, 6 p. m.; Mauritius, 9 a. m., local time. The elevation of Dartmoor is 1,400 feet, or 426.7 meters; Davos Platz, 5,1052 feet, or 1,556.1? meters; Fort Napier, 2,200 feet, or 670.6 meters.
*Detached clouds.

By authority of the
MINISTER OF FOREIGN AFFAIRS.

COSTA RICA SERIES.

Furnished by the coöperation of Senor Federico Maison, Director of the Central Office of Statistics and Meteorology.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
San José																			

DANISH SERIES.

Furnished by the coöperation of Captain N. Hoffmeyer, Director of the Royal Danish Meteorological Institute at Copenhagen.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—6.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Copenhagen			29.63	752.7	35.8	2.1	84	WSW			2		4						
Fanöe			29.67	753.6	37.8	3.2	85	WSW			4		8						
Godthaab, (Greenland)			29.26	743.1	13.6	—10.2	87	SSE			6		10						
Stykkisholm, (Iceland)			29.17	740.8	23.0	— 5.0	93	NE			8		10						
Thorshavn, (Faröe)			28.79	731.2	37.0	2.8	64	WNW			6		8					Raining	
Vestervig			29.51	749.5	36.0	2.2	85	W			6		6					Hailing	

NOTE.—The originals give the wind-force by the scale 0 to 6; occasionally, weather by Vienna symbols; no distinction between the amount of upper and lower clouds.

FRENCH SERIES.

Furnished by the coöperation of His Excellency, U. J. Le Verrier, Director of the Paris Observatory, and the respective Observers.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Alençon	.....	.....	30.45	773.5	42.8	6	83	W	.....	.....	2	.....	8kn	.....	W	0.181	4.6	Very cloudy	Normal School.
Amiens	.....	.....	30.39	771.8	44.2	6.8	84	SSW	.....	.....	3	.....	.....	.....	W	0.071	1.8	.....	Normal School.
Avignon	.....	.....	30.39	771.8	51.1	10.6	54	N	.....	.....	6	.....	0	.....	.....	0	0	Very clear.	Normal School.
Bar-sur-Seine	.....	.....	30.39	772.0	43.5	6.4	61	N	.....	.....	4	.....	8kn	.....	NW	0.358	9.1	Very cloudy	C. Saillard.
Beaumette, (near Angers)	.....	.....	30.48	774.1	47.7	8.7	57	W	17.0	7.6	.....	.....	.....	.....	NW	0.031	0.8	....	Beaumette Observ'tory.
Beauvais	.....	.....	30.35	770.8	44.6	7	55	W	.....	.....	4	.....	2	.....	NW	0.108	2.75	Slightly cl'dy	Normal School.
Besançon	.....	.....	30.46	773.6	41.4	5.2	66	W	.....	.....	3	.....	8	.....	W	0.425	10.8	Very cloudy	Normal School.
Bourg en Bresse	.....	.....	30.50	774.8	41.9	5.5	63	S	.....	.....	4	.....	5kn	.....	E	0.20	5.	Cloudy.....	Normal School.
Bourges	.....	.....	30.45	773.4	45.7	7.6	77	SW	.....	.....	2	.....	2	.....	SW	0.201	5.1	Slightly cl'dy	Normal School.
Brest	.....	.....	30.43	772.8	51.3	10.7	64	W	.....	.....	5	.....	9	.....	W	0.089	2.25	.....	Naval Observatory.
Carcassonne	.....	.....	30.36	771.1	49.6	9.8	43	W	.....	.....	4	.....	2	.....	E	0.059	1.5	Slightly cl'dy	Normal School.
Caen	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Chartres	.....	.....	30.37	771.3	45.7	7.6	53	NW	.....	.....	4	.....	4	.....	S	0	0	.....	Normal School.
Châlons-sur-Marne	.....	.....	30.38	771.6	45.3	7.4	55	NW	.....	.....	6	.....	5k	.....	SE	0.201	5.1	Cloudy.....	Normal School.
Clermont	.....	.....	30.49	774.4	46.6	8.1	61	NW	.....	.....	3	.....	5	.....	NW	0.059	1.5	Cloudy.....	Puy de Dome Obs'y.
Commercy	.....	.....	30.31	769.8	39.2	4	80	W	.....	.....	6	.....	5kns	.....	W	0.248	6.3	Cloudy.....	Normal School.
Commune de Gréasque*	.....	.....	30.30	769.7	48.4	9.1	34	NW	.....	.....	8	.....	2	.....	NW	0	0	.....	M. Kina.
Grenoble	.....	.....	30.44	773.2	42.1	5.6	65	NW	.....	.....	8	.....	5kn	.....	NE	0.173	4.40	Cloudy.....	Normal School.
La Roche-sur-Yon	.....	.....	30.54	775.7	48.7	9.3	71	SW	.....	.....	2	.....	5	.....	E	0.213	5.4	Partly cl'dy.	Normal School.
Le Mans	.....	.....	30.47	773.9	44.8	7.1	77	W	.....	.....	4	.....	5	.....	W	0.116	2.95	Cloudy.....	Normal School.
Lons-Le-Saulnier	.....	.....	30.45	773.4	41.5	5.3	61	N	.....	.....	4	.....	5	.....	S	0.362	9.20	Raining.....	Normal School.
Lorient	.....	.....	30.54	775.7	52.5	11.4	52	W	.....	.....	2	.....	5	.....	W	0	0	Cloudy.....	Naval Observatory.
Mâcon	.....	.....	30.46	773.7	43.7	6.5	88	WNW	.....	.....	2	.....	5	.....	NW	0.228	5.8	Cloudy.....	Normal School.
Metz	.....	.....	30.32	770.1	38.5	3.6	80	WSW	.....	.....	6	.....	5k	.....	W	0	0	.....	M. Schuster.
Mirecourt	.....	.....	30.23	767.8	36.0	2.2	67	NW	.....	.....	6	.....	8	.....	SE	0.24	6.	Very cloudy	Normal School.
Nismes	.....	.....	30.30	771.8	56.5	13.6	86	N	.....	.....	1	.....	0	.....	.....	0	0	Clear	Normal School.
Orleans	.....	.....	30.41	772.4	45.0	7.2	69	W	.....	.....	2	.....	5	.....	E	0	0	Cloudy.....	Normal School.
Paris, Observatory	.....	.....	30.37	771.5	45.5	7.5	47	WNW	.....	.....	4	.....	5k	.....	WNW	0.211	5.37	Cloudy.....	National Observatory.
Parthenay	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Privas	.....	.....	30.42	772.6	44 6	7	.....	NW	.....	.....	2	.....	10	.....	NW	0	0	Covered	Normal School.
Rochefort, Observatory	.....	.....	30.60	777.2	52.7	11.5	73	WNW	.....	.....	4	.....	2	.....	SE	0	0	¼ covered....	Naval Observatory.
Rouen	.....	.....	30.34	770.7	47.3	8.5	57	WSW	.....	.....	2	.....	5	.....	W	0.209	5.3	Cloudy.....	Normal School.
Saint Lo	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Tarbes	29.38	746.3	30.50	774.7	47.1	8.4	93	WSW	.....	.....	2	.....	2	.....	E	0.071	1.8	Slightly cl'dy	Normal School.
Villefranche	.....	.....	30.49	774.5	44.6	7	89	NW	.....	.....	6	.....	2	.....	N	0	0	Slightly cl'dy	Normal School.
Sub-Series.																			
Fort de France, Martinique	.....	.....	29.91	759.7	75.2	24	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	L'Abbé Marchési.
Marseilles	.....	.....	30.26	768.7	53.1	11.7	33	NW	.....	.....	8	.....	3	.....	.....	0	0	Partly cl'dy	Marseilles Observatory.
Mont-Louis	25.17	639.3	30.48	774.3	37.8	3.2	53	WSW	7.4	3.33	.....	.....	4	.....	W	0	0	.....	—. Falguère.
Montsouris, Paris	.....	.....	30.35	770.9	45.9	7.7	59	WNW	.....	.....	3	.....	8	.....	WNW	0.197	5.0	.....	Montsouris Observatory
Perpignan	.....	.....	30.37	771.4	53.2	11.8	55	NW	18.6	8.33	.....	.....	7	.....	NW	0	0	.....	Dr. Fines.
Pic du Midi, (Summit,) H. P.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. Baylac.
Pic du Midi, (Plantade,) H. P.	22.79	578.9	.....	.....	21.7	— 5.7	.....	NW	.....	.....	3	.....	9	.....	.....	0.772	19.6	Snowy.....	General de Nansouty.
Saint Maur, (near Paris)	.....	.....	30.36	771.1	46.9	8.3	54	W	.....	.....	3	...	9	.....	.....	0.197	5.0	Cloudy.....	E. Renou.
Toulouse	.....	.....	30.32	777.7	48.6	9.2	66	NW	.....	.....	3	.....	7	.....	.....	0.134	3.4	.....	Toulouse Observatory.
Tours	.....	.....	30.48	774.3	47.1	8.4	85	WNW	.....	.....	2	.....	8	.....	NW	0.130	3.3	.....	C. Marquet.
Versailles, (near Paris)	.....	.....	30.36	771.1	45.3	7.4	57	NW	.....	.....	3	.....	7	.....	.....	0.280	7.11	Fair	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai)	.....	.....	30.36	771.0	34.5	1.4	93	NNW	3.4	1.50	.....	.....	10	.....	.....	0.417	10.6	Rainy	Marc Dechevrens, S. J.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—Generally, the originals give the wind-force by the scale 0 to 7; no distinction between upper and lower clouds, and, in the official series, the amount by the scale 0 to 4; the rain-fall as measured at 7, 8 or 9 a. m., local time; at Clermont, 9 a. m. of the following day; the weather in general terms as published. The elevation of Clermont is 388 meters, or 1,272.9 feet; Commune de Gréasque, 322 meters, or 1,056.4 feet; Tarbes, 308 meters, or 1,010 feet; Mont-Louis, 1,586.40 meters, or 5,204.8 feet; Pic du Midi, (Summit,) 2,877 meters, or 9,439.1 feet; Pic du Midi, (Plantade,) 2,366 meters, or 7,762.6 feet. In correcting the Mont-Louis barometric observations for altitude, the constant 135. millimeters has been added. *Bouches-du-Rhône

GERMAN SERIES.

Furnished by the coöperation of Professor Dr. G. Neumayer, Director of the German Naval Observatory, Hamburg.

Bamberg	.....	.....	29.88	758.9	34.7	1.5	94	W	.....	.....	3	.....	10	.....	.....	0.157	4.0	.....	Prof. T. Hoh.
Berlin	.....	.....	29.87	758.6	41.2	5.1	61	SW	.....	.....	2	.....	8	.....	.....	0.055	1.4	.....	Prof. Arndt.
Breslau	.....	.....	29.85	758.2	35.2	1.8	100	W	.....	.....	5	.....	10	.....	.....	0.240	6.1	.....	Royal University Obs'y.
Carlsruhe	.....	.....	30.23	767.9	39.9	4.4	86	SW	.....	.....	5	.....	10	.....	.....	0.394	10.0	.....	A. Senz.
Cassel	.....	.....	29.99	761.7	36.0	2.2	85	NNW	.....	.....	6	.....	8	.....	W	0.110	2.8	Rain & snow	Dr. H. Möhl.
Crefeld	.....	.....	30.07	763.7	41.7	5.4	64	W	.....	.....	4	.....	8	.....	.....	0.20	5.	.....	Director Lose.
Emden	.....	.....	29.97	761.3	39.7	4.3	84	W	.....	.....	3	.....	1	.....	.....	0.098	2.5	.....	Prof. Prestel.
Frankfort on the Main	.....	.....	30.15	765.9	38.8	3.8	71	WNW	.....	.....	2	.....	9	.....	.....	0.406	10.3	.....	Physical Society.
Friedrichshafen	28.84	732.3	30.33	770.3	38.5	3.6	68	W	.....	.....	9	.....	7	.....	.....	0.083	2.1	Rain & snow	M. Wilhelm.
Hamburg	.....	.....	29.85	758.1	37.9	3.3	85	WSW	.....	.....	4	.....	7k	.....	WNW	0.071	1.8	Squally.....	Captain F. Hegemann
Kiel	.....	.....	29.77	756.1	36.9	2.7	82	SW	.....	.....	3	.....	10	.....	.....	0.059	1.5	.....	Prof. G. Karsten.
Königsberg, (Prussia)	.....	.....	29.71	754.7	31.5	— 0.3	95	SW	.....	.....	5	.....	10	.....	.....	0	0	.....	Prof. E. Luther.
Köslin	.....	.....	29.75	755.6	34.7	1.5	.....	W	.....	.....	2	.....	5	.....	.....	0	0	.....	H. Müller.
Leipsic	.....	.....	29.89	759.3	33.1	0.6	100	WSW	.....	.....	2	.....	10	.....	.....	0.091	2.3	Snowing.....	Prof. Bruhns.
Memel	.....	.....	29.71	754.7	30.0	— 1.1	88	SSE	.....	.....	5	.....	Fog	.....	.....	.....	.....	Snowing.....	Reinbrecht & Skalweit.
Münster	.....	.....	30.05	763.3	40.8	4.9	76	N	.....	.....	5	.....	10	.....	.....	0.213	5.4	.....	Prof. E. Heis.
Neufahrwasser	.....	.....	29.68	763.8	33.4	0.8	85	SSW	.....	.....	2	.....	10	.....	.....	0.075	1.9	.....	A Lothe.
Posen	.....	.....	29.78	756.3	36.7	2.6	93	NW	.....	.....	5	.....	10	.....	.....	0.020	0.5	Snowing.....	Dr. Magener.
Strassburg, (in Alsace)	.....	.....	30.30	769.6	40.8	4.9	66	WNW	.....	.....	4	.....	10	.....	NW	0.189	4.8	.....	Dr. Schur.
Stuttgart	.....	.....	30.22	767.6	37.9	3.3	58	W	.....	.....	6	.....	5	.....	.....	0.185	4.7	Rain & snow	Prof. Schoder.
Thorn	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Dr. Hasenbalg.
Treves, (Trier)	.....	.....	30.17	766.3	39.9	4.4	62	SW	.....	.....	7	.....	5	.....	.....	0.437	11.1	Light fog.....	Prof. Flesch.
Weissenburg, (Bavaria)	28.49	723.7	30.06	763.5	33.1	0.6	90	W	.....	.....	7	.....	10	.....	.....	0.031	0.8	Rain & snow	Dr. von Bebber.
Wustrow, Naval School	.....	.....	29.80	756.8	35.2	1.8	91	SW	.....	.....	3	.....	4	.....	.....	0	0	.....	E. F. Schütz.
German Naval Series.																			

NOTE.—The elevation of Friedrichshafen is 413.4 meters, or 1,356.3 feet; Weissenburg, 431 meters, or 1,414.0 ft. In the originals the distinction between the amount of upper and lower clouds is not made. It is not always certain that the remarks in the weather column refer to the moment of observation.

GREEK SERIES.

Furnished by the coöperation of Professor Dr. J. F. Julius Schmidt, Director of the Royal Observatory at Athens.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Athens			30.11	764.8	45 0	7.2		NE										Cloudy	

Note.—The originals give the barometer corrected, but not reduced to sea-level; occasionally the kind of clouds; the weather as published. They omit the humidity, wind-force, amount of cloudiness and rain-fall.

ITALIAN SERIES.

Furnished by the coöperation of His Excellency the Minister of Agriculture, Industry and Commerce, and the respective Observers.

Udine			29.97	761.1	37.2	2.9	61	Calm	0	0			10			0	0		Prof. Giovanni Clodig
Stelvio	21 97	558.0			15.8	— 9.0		SE			6		10					Snowing	Signora Ernesta Manfredi.
Valdobbia	22.01	559.1			16.0	— 8.9	80	WSW			8		10					Snowing	Ab. Dom. Mongini.
Padua			29.98	761.6	34.2	1.2	76	NNW	2.5	1.1			10	W		0	0		Prof. Dott. Lor nzoni.
Vicenza			29.98	761.6	36.9	2.7	74	SW	0.7	0.3			9			0	0		Conte Alm. Da Schio.
Verona			29.98	761.4	39.4	4.1	90	W			1		0			0	0		Dott. B. Bertoncelli.
Bergamo	28 57	725.7	29.94	760.5	46.0	7.8	3	W			8		0			0	0		Prof Trionfini Car'o.
Domodossola			30.17	766.2	43.2	6.2	24	N			6		9			0	0		Prof. Giuseppe C..lza.
Milan			30.05	763.3	47.7	8.7	30	NNW			2		2			0	0		Ab. Gio. Capelli
Pavia			30.02	762.6	39.9	4.4	74	SW			6		3	SW		0	0		Prof. Gio. Cantoni.
Moncalieri			30.07	763.7	48.4	9.1	31	NNE	8.1	3.6			2			0	0		Prof. P. F. Denza.
Mondovi	28.09	713.5	30.08	764.0	46.6	8.1	31	NW			8		0			0	0		Prof. D. U. Bruno.
Porto Maurizio			30.03	762.7	52.0	11.1	65	E			2		0			0	0		Prof. L. Vassallo.
Genoa			29.98	761.6	54.7	12.6	34	NE	4.8	1.9			0			0	0		Prof. G. M. Garibaldi.
Piacenza			29.99	761.8	40.1	4.5	74	WNW	19.2	8.6			2	WNW		0	0		Dott. G. Manzi.
Parma			30.00	762.0	40.6	4.8	71	SW			4		2			0	0		Prof. P. Pigorini.
Florence			30.00	761.9	38.7	3.7	80	W			2		10			0	0		Cav. F. Meucci.
Leghorn			29.97	761.3	46.6	8.1	74	S	4.3	1.9			10			0	0		Prof. P. Monte.
Siena	28.72	729.6	29.98	761.4	39.6	4.2	66	NNW	0	0			10	W		0	0		Prof. L. Toscani.
Urbino	28.40	721.3	30.03	762.8	40.8	4.9	62	SW			2		10			0	0		Prof. P. Serpieri.
Pesaro			29.98	761.6	40.5	4.7	70	NW	6.3	2.8			10	W		0	0		Prof. Luigi Guidi.
Ancona			29.98	761.6	43.2	6.2	74	W			2		10			0	0		Prof. F. De— Bosis.
Grosseto			30.01	762.3	46.8	8.2	72	NE			2		9	SE		0	0		Avv. P. Ponticelli.
Rome			30.01	762.3	54.7	12.6	65	ESE	5.6	2.5			10	SW		0	0		Prof's. P. Secchi & L. Respighi.
Naples, O. U			30.05	763.3	56.8	13.8	62	SSW			4		7	NW		0	0		Prof. L. Palmieri.
Lecce			30.08	764.1	48.2	9.0	61	WNW	13.0	5.8			5	WNW		0	0		Prof. C. De—Giorgi.
Cosenza			30.10	764.4	50.2	10.1	73	SW	7.4	3.3			4	ESE		0.031	0.8	Light rain	Prof. F. D. Conti.
Cagliari																			Prof. A. Pacinotti.
Ilipposto, (Sicily)			30.05	763.3	54.9	12.7	80	SW			2		5	SE		0.535	13.6	Raining	Prof. F. Cafiero.
Palermo			30.08	763.9	55.0	12.8	69	W	8.1	3.6			5			0.024	0.6	Rain & hail	Prof. G. Cacciatore.
Caltanissetta	28.07	712.9	30.08	763.9	45.0	7.2	83	W			4		10	NE		0.047	1.2	Raining	Prof. A. Pagani.
Siracusa			30.06	763.4	57.2	14.0	65	SSW			4		8	E		0.189	4.8	Raining	Prof. V. Giuliano.
Sub-Series.																			
Naples, S. R			30.06	763.4	53.2	11.8	67	NE	0	0			7	E		0	0		Prof. F. Brioschi.

Note.—The originals give the wind-force by the scale 0 to 4, or the velocity in kilometers per hour; generally, no distinction between upper and lower clouds; occasionally the weather by the Vienna symbols. The elevation of Stelvio is 2,543.0 meters, or 8,342.9 feet; Valdobbia, 2,548.0 meters or 8,359.3 feet; Bergamo, 379.6 meters, or 1,245.3 feet; Mondovi, 553 meters, or 1,824.2 feet; Siena, 348.5 meters, or 1,143.3 feet; Urbino, 451 meters, or 1,479.7 feet; Caltanissetta, 570.3 meters, or 1,871.0 feet.

JAPANESE SERIES.

Furnished by the coöperation of the Imperial University of Tokei, Japan.

Tokei			29.89	759.2	40	4.4		N	2	0.9			10			0	0		Prof. P. V. Veeder.

Note.—The originals give the amount of cloudiness by the scale 0 to 4 without distinguishing between upper and lower clouds. The rain-fall is measured at 7 a. m., local time

By authority of the Secretary of Public Works.

MEXICAN SERIES.

Furnished by the coöperation of Senor Mariano Barcena, Director of the Central Meteorological Observatory in the City of Mexico.

Mexico																			Mariano Barcena.
																			Vicente Reyes.
																			Miguel Perez.
																			(Engineers in charge.)

Note.—The elevation of Mexico is 2,290 meters, or 7,512.9 feet. The rain-fall is measured at 6 a. m., local time.

NETHERLANDS' SERIES.

Furnished by the cooperation of Professor Buys Ballot, Director of the Royal Meteorological Institute of the Netherlands at Utrecht.

Flushing			30.17	766.2	42.3	5.7		WNW			5					0.012	0.3		
Groningen			29.86	758.5	40.3	4.6		W			5					0.063	2.1		
Heider			29.94	760.5	42.1	5.6		W			6					0.165	4.2		
Utrecht			30.91	762.2	43.3	6.3	66	W			6		5			0.217	5.5	Cloudy	

Note.—The originals give the wind-pressure in kilograms per square meter; for Utrecht, they give the weather as published, from which the amount of cloudiness is taken by the scale 0 to 4, without distinguishing between upper and lower clouds. It is assumed that the barometer readings have been reduced to sea-level.

NORWEGIAN SERIES.

Furnished by the coöperation of Professor H. Mohn, Director of the Royal Norwegian Meteorological Institute at Christiania.

Bergen			29.13	740.0	37.8	3.2	80	SSW	24.5	10.5			8			0.311	8.0		
Bröno			28.88	733.6	32.7	0.4	54	SE	17.9	8			6						
Christiania			29.26	743.2	33.4	0.8	87	SSW	6.3	2.8			10			0	0		
Tromsö			28.92	734.5	29.6	— 1.4	68	SE	20.1	9			9			0	0		

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols. The cloudiness and weather at Bergen refer to 2h., p. m., local time, instead of 1h., 4 min.

PORTUGUESE SERIES.

Furnished by the coöperation of J. C. de Brito Capello, Director of the Meteorological Observatory of the Infante Don Luiz at Lisbon.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Angra, (Azores)	.....	.....	30.07	779.0	56.5	13.6	89	SSE	1.8	0.8	.....	.....	7	.....	.....	0.047	1.2	....	Dr. J. A. Sampaio.
Campo Major	.....	.....	30.52	775.3	56.3	13.5	62	ENE	8.8	3.92	.....	.....	0	.....	.....	0	0	.....	Dr. A. M. R. dos Santos.
Funchal, (Madeira)	.....	.....	30.46	773.6	66.4	19.1	62	ESE	8.4	3.75	.....	.....	6	.....	.....	0	0	.....	Capt. D. A. de Cunha.
Lisbon	.....	.....	30.60	777.1	56.7	13.7	61	NNE	13.7	6.1	.....	.....	0	.....	.....	0	0	.....	The Observatory.
Ponta Delgada, (Azores)	.....	.....	30.66	778.8	59.5	15.3	66	ESE	5.6	2.5	.....	.....	3	.....	.....	0	0	.....	
.....																			

Note.—The originals give the wind-velocity in kilometers per hour; occasionally, the weather by the Vienna symbols; the amount of cloudiness without distinguishing between upper and lower clouds; the barometer corrected but not reduced to sea-level. The rain-fall at Lisbon is measured at noon, instead of 0 h. 6 m., p. m.

RUSSIAN SERIES.

Furnished by the coöperation of Professor H. Wild, Director of the Imperial Central Physical Observatory of Russia, at St. Petersburg.

Warsaw	.....	.....	29.81	757.2	32.0	0.0	92	S	16	7	.....	.....	10	.....	.....	.....	.....	.....	Astronomical Obs.
Wilna	.....	.....	29.93	760.2	18.5	— 7.5	63	SE	2	1	.....	.....	9	.....	.....	.....	.....	.....	Astronomical Obs.
Dorpat	.....	.....	29.83	757.7	22.6	— 5.2	89	S	9	4	.....	.....	10	.....	.....	.....	.....	.....	Physical Cabinet.
St. Petersburg	.....	.....	29.87	758.6	18.0	— 7.8	89	SSE	18	8	.....	.....	10	.....	.....	.....	.....	.....	Central Physical Obs.
Kuopio	.....	.....	29.64	752.8	20.3	— 6.5	.....	S	22	10	.....	.....	10	.....	.....	.....	.....	Snowing.....	Ch. Forsten.
Kieff	.....	.....	30.29	769.3	— 1.3	—18.5	89	ESE	7	3	.....	.....	1	.....	.....	.....	.....	.....	Physical Cabinet.
Nikolaiev	.....	.....	30.31	769.8	10.6	—11.9	71	ENE	13	6	.....	.....	0	.....	.....	.....	.....	.....	Kurdakof
Kertch	.....	.....	30.23	767.9	23.9	— 4.5	77	NE	9	4	.....	.....	7	.....	.....	.....	.....	.....	Lagorio.
Moscow	.....	.....	30.36	771.1	3.2	—16.0	66	S	7	3	.....	.....	0	.....	.....	.....	.....	.....	Meteorological Obs.
Lugan	.....	.....	30.42	772.7	2.8	—16.2	66	E	7	3	.....	.....	0	.....	.....	.....	.....	.....	Meteorological Obs.
Archangel	.....	.....	29.72	754.8	10.4	—12.0	100	SSW	22	10	.....	.....	10	.....	.....	.....	.....	.....	Ogorodnikof.
Tiflis	28.97	735.9	30.48	774.1	32.2	0.1	83	Calm	0	0	.....	.....	10	.....	.....	.....	.....	.....	Physical Observatory.
Astrakhan	.....	.....	30.55	776.0	16.5	— 8.6	55	NNW	2	1	.....	.....	0	.....	.....	.....	.....	.....	Sebastianof.
Kasan	.....	.....	30.34	770.6	0.1	—17.7	93	SW	4	2	.....	.....	3	.....	.....	.....	.....	.....	Physical Cabinet.
Orenburg	.....	.....	30.10	764.5	— 4.9	—20.5	66	E	13	6	.....	.....	5	.....	.....	.....	.....	.....	Tschernischei.
Ekaterinburg	29.21	741.8	30.28	769.0	— 5.3	—20.7	78	WSW	4	2	.....	.....	10	.....	.....	.....	.....	.....	Meteorological Obs.
Nukuss	.....	.....	30.63	778.0	0 7	—17.4	36	ENE	7	3	.....	.....	.....	.....	.....	.....	.....	.....	
Kasaly	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Bobrof.
Tashkend	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Michelson.
Barnaul	.....	.....	30.30	769.7	3.7	—15.7	90	Calm	0	0	.....	.....	10	.....	.....	.....	.....	Snowing.....	Meteorological Obs.
Yeniseisk	.....	.....	30.36	771.1	—33.7	—36.5	72	SW	2	1	.....	.....	0	.....	.....	.....	.....	.....	Marks.
Irkutsk	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Usolzef.
Peking, (China)	.....	.....	30.35	770.9	24.4	— 4.2	73	Calm	0	0	.....	.....	0	.....	.....	.....	.....	.....	Physical Observatory.
Nertchinsk	28.06	712.6	30.52	775.1	—29.7	—34.3	94	Calm	0	0	.....	.....	5	.....	.....	.....	.....	.....	Meteorological Obs.
Vladivostock	.....	.....	29.89	759.3	17.4	— 8.1	62	NW	7	3	.....	.....	0	.....	.....	.....	.....	.....	
Nikolaievsk, on the Amoor	.....	.....	.....	.....	28.0	— 2.2	.....	ENE	2	1	.....	.....	10	.....	.....	.....	.....	Snowing....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols; they omit the rain-fall. The elevation of Tiflis is 409 meters, or 1,341.8 feet; Ekaterinburg, 306. 4 ? m., or 1,005.2 ? ft.; Tashkend, 494.2 ? m., or 1,621.3 ? ft.; Irkutsk, 392 m., or 1,286 ft.; Nertchinsk, 592.0 ? m., or 1,942.2 ? ft.

SPANISH SERIES.

Furnished by the coöperation of Antonio Aguilar, Director of the Royal Observatory at Madrid, and of Don Cecilio Pujazon, Captain R. N. Director of the Naval Observatory at San Fernando.

Madrid	.....	.....	30.56	776.2	54.1	12.3	46	NE	13.4	6.00	.....	0	0	.....	.....	0	0	Clear.....	Royal Observatory.
San Fernando	.....	.....	30.50	774.7	60.6	15.9	69	N	0	0	.....	0	0	.....	.....	.....	.....	.....	Naval Observatory.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

Note.—The originals give the weather in general terms, as published; rain-fall for San Fernando from preceding to following midnight; wind-velocity for Madrid in kilometers per hour.

SWEDISH SERIES.

Furnished by the coöperation of Professor R. Rubenson, Director of the Royal Swedish Meteorological Institute, at Stockholm, and of Dr. H. H. Hildebrandsson, Chief of the Meteorological Division of the Upsala Observatory.

Haparanda	.....	.....	29.40	746.8	24.8	— 4.0	100	S	.....	.....	4	.....	10	.....	.....	0	0	.....	
Umea	.....	.....	29.33	744.9	28.8	— 1.8	96	S	.....	.....	7	.....	10	.....	.....	.....	.....	Snowing.....	
Hernosand	.....	.....	29.27	743.5	32.0	0.0	96	SW	.....	.....	4	.....	10	.....	.....	0.020	0.5	Snowing.....	
Stockholm	.....	.....	29.42	747.2	34.7	1.5	87	SSW	.....	.....	2	.....	8	.....	.....	0.004	0.1	.....	
Wisby	.....	.....	29.54	750.4	33.8	1.0	92	WSW	.....	.....	6	.....	10	.....	.....	0.024	0.6	.....	
Upsala. Sub-Series.																			
.....	.....	.....	29.39	746.5	34.9	1.6	87	SSW	12.3	5.5	.....	.....	10	.....	SW	0.002	0.05	.....	Dr. Hildebrandsson.

Note.—The originals give the wind-force by the scale 0 to 6, and Upsala also velocity in meters per second; occasionally, the weather by the Vienna symbols, or in general terms; no distinction between the amount of upper and lower clouds. The rain-fall is measured at 8 a. m., local time.

SWISS SERIES.

Furnished by the coöperation of Professor R. Wolf, Director of the Observatory at Zurich, and of Professor E. Plantamour, Director of the Observatory at Geneva.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Geneva	28.95	735.3	30.42	772.6	40.8	4.9	44	NW	.....	.....	5	.....	2	.....	.....	0.252	6.4	Clear	The Observatory.
Zurich	28.64	727.4	30.34	770.6	35.6	2.0	75	W	.....	.....	4	.....	8	.....	.....	0.532	13.5	Snowing	The Observatory.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Note.—For Geneva the corresponding departures from the normal values are: Barometer, +8.1 mm; Thermometer, +2.8 cent.; Relative Humidity, —32 per cent.

Note.—The rain-fall is measured at Zurich at 7 a. m. on the following day. The originals give the barometer corrected but not reduced to sea-level; the wind-force by the scale 0 to 4 for Zurich; the amount of cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The elevation of Geneva is 408 meters, or 1,339 feet, and that of Zurich 470 meters, or 1,542 feet.

TURKISH SERIES.

Furnished by the coöperation of A. Coumbary, Effendi, Director of the Central Observatory at Constantinople, and of Professor C. V. A. Van Dyck, Superintendent of the Lee Observatory at Beirut.

Constantinople	.....	.....	30.15	765.9	36.0	2.2	76	ENE	10	4.5	.....	.....	10	.....	ENE	Inap.	Inap.	.....	
Fao, (Persian Gulf)	.....	.....	30.37	771.5	66.2	19.0	.....	NW	.....	.....	1	.....	0	.....	.....	.....	.....	.....	
Salonica	.....	.....	30.14	765.6	46.8	8.2	.....	NW	.....	.....	2	.....	8	.....	.....	.....	.....	.....	
Valona	.....	.....	29.97	761.2	49.5	9.7	.....	SW	.....	.....	1	.....	10	.....	.....	.....	.....	.....	
Varna	.....	.....	30.12	765.0	26.6	— 3.0	.....	S	.....	.....	2	.....	0	.....	.....	.....	.....	.....	
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y	.....	.....	30.02	762.6	64.0	17.8	63	SW	.....	.....	1	.....	9cs	.....	.....	0	0	Overcast	Prof. C. V. A. Van Dyck

Note.—The originals give the wind-force by the scale 0 to 7, (except Beirut, by the scale 0 to 12, and Constantinople velocity in meters per second;) the weather in general terms as published; no distinction between upper and lower clouds, and, except Constantinople and Beirut, the amount by the scale 0 to 4. It is assumed that the barometer is reduced to sea-level.

CANADIAN SERIES.

Furnished by the coöperation of Professor G. T. Kingston, Director of the Magnetic Observatory at Toronto, and Superintendent of the Meteorological Office of the Dominion of Canada, and the respective Observers. Those marked with a star (*) are also telegraphed daily to the office of the Chief Signal Officer, U. S. Army.

Pathurst, N. B	.....	.....	30.25	768.3	— 6.5	—21.4	80	SW	2.0	0.9	.....	.....	8	.....	.....	.....	.....	.....	Hon. J. Ferguson.
Brockville, Ontario	.....	.....	30.20	767.1	19	— 7.2	.....	E	3	1.3	.....	.....	10s	.....	E	0.10	2.5	Cloudy	W. R. Bigg.
*Chatham, N. B	.....	.....	30.28	769.1	— 8	—22.2	100	Calm	0	0	.....	8c	2ks	SW	SW	0	0	Fair	G. A. Blair.
Charlottetown, P. E. Island	.....	.....	30.35	770.9	—16	—26.7	88	Calm	0	0	.....	0	0	.....	.....	0	0	Hazy	H. J. Cundall, C. E.
Cornwall, Ontario	.....	.....	30.21	767.3	15.7	— 9.1	91	N	.....	.....	1	.....	10s	.....	.....	0.15	3.8	Unsettled	James Smith, M. A.
Dalhousie, N. B	.....	.....	30.34	770.6	— 7.0	—21.7	100	NW	.....	.....	1	.....	.....	.....	.....	0	0	Threatening	H. A. Johnson.
Esquimault, B. C	.....	.....	29.77	756.1	39.6	4.2	100	Calm	.....	.....	.....	4cs	0	.....	.....	0	0	Hazy	W. H. Bevis.
*Father Point, Quebec	.....	.....	30.19	766.8	13	—10.6	83	S	2	0.9	.....	.....	5s	.....	.....	0.09	2.3	Cloudy	J. McWilliams.
Fredericton, N. B	.....	.....	30.34	770.6	— 7.9	—22.2	100	W	1	0.4	.....	.....	Haze	.....	.....	Inap.	Inap.	Cloudy	Prof. Harrison.
*Fort Garry, Manitoba	.....	.....	30.06	763.5	10	—12.2	94	S	2	0.9	.....	0	0	.....	.....	0	0	Clear	James Stewart.
Goderich, Ontario	.....	.....	30.20	767.1	21.7	— 5.7	78	Calm	.....	.....	0	0	0	.....	.....	0	0	Very fine	H. J. Strang, M. A.
Granton, Ontario	29.00	736.6	30.19	766.8	17.4	— 8.1	.....	Calm	.....	.....	0	.....	Fog	.....	.....	6	0	Foggy	James Grant.
*Halifax, N. S	.....	.....	30.34	770.6	— 5	—20.6	92	NW	6	2.7	.....	2cs	2ks	.....	.....	0	0	Fair	F. Allison, M. A.
Hamilton, Ontario	.....	.....	30.19	766.8	25.0	— 3.9	85	W	.....	.....	1	2c	0	.....	.....	0	0	Bright	G. Dickson.
Heart's Content, N. F	.....	.....	30.26	768.6	2	—16.7	100	E	.....	.....	1	0	0	.....	.....	0.03	0.8	Fine	E. Weedon.
*Kingston, Ontario	.....	.....	30.22	767.6	17	— 8.3	94	Calm	0	0	.....	0	0	.....	.....	0.08	2.0	Clear	S. Woods, M. A.
*Montreal, Quebec	.....	.....	30.20	767.1	15	— 9.4	96	Calm	0	0	.....	.....	10n	.....	.....	0.05	1.3	Cloudy	C. H. McLeod, C. E.
*Ottawa, Ontario	.....	.....	30.17	766.3	17	— 8.3	75	NE	6	2.7	.....	.....	10ks	.....	NE	0.30	7.6	Cloudy	J. B. Haney.
*Parry Sound, Ontario	.....	.....	30.15	765.8	24	— 4.4	93	Calm	0	0	.....	.....	10n	.....	.....	0	0	Cloudy	Rev. R. Mosley.
Port Dover, Ontario	.....	.....	30.16	766.1	25	— 3.9	100	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	H. Morgan.
Port Hastings, N. S	.....	.....	30.34	770.6	— 2	—18.9	.....	Calm	0	0	.....	.....	.....	.....	.....	0	0	Fine	Peter Grant.
Port Stanley, Ontario	.....	.....	30.20	767.1	14	—10.0	85	W	2	0.9	.....	0	0	.....	.....	0	0	Clear	M. Payne.
*Quebec, Quebec	.....	.....	30.21	767.3	16	— 8.9	83	Calm	0	0	.....	.....	10n	.....	.....	0.10	2.5	Cloudy	Capt. Ashe, R. N.
*Rockliffe, Ontario	.....	.....	30.22	767.6	17	— 8.3	98	E	1	0.4	.....	.....	10s	.....	SW	0	0	Cloudy	
St. John, N. B	.....	.....	30.34	770.6	8.0	—13.3	89	Calm	0	0	.....	10ck	0	.....	.....	0.01	0.3	Overcast	G. Murdoch, C. E.
*Sangeen, Ontario	.....	.....	30.15	765.8	18	— 7.8	52	Calm	0	0	.....	2cs	0	.....	.....	0	0	Clear	K. Stewart.
Stayner, Ontario	.....	.....	30.19	766.8	14	—10.0	96	Calm	0	0	.....	2c	0	NW	.....	0	0	Fair	R. J. Cole.
Stratford, Ontario	28 82	732.0	30.23	767.8	7.2	—13.8	98	Calm	0	0	.....	.....	Fog	.....	.....	0	0	Foggy	C. J. MacGregor, M. A.
*Sydney, C. B	.....	.....	30.37	771.4	—16	—26.7	94	SW	1	0.4	.....	0	0	.....	.....	0	0	Clear	T. C. Hill.
*Toronto, Ontario	.....	.....	30.18	766.6	16	— 8.9	83	W	2	0.9	.....	5cs	0	W	.....	0	0	Fair	Magnetic Observatory.
Woodstock, Ontario	.....	.....	30.21	767.3	17.6	— 8.0	96	S	2	0.9	.....	3cs	0	.....	.....	0	0	Fair	J. Montgomery.
Sub-Series.																			
St. Johns, Newfoundland	.....	.....	30.31	769.9	10.0	—12.2	.....	NW	.....	.....	.....	10k	10s	.....	.....	0.02	0.5	Fair	John Delany.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Note.—The originals for Brockville, Charlottetown, Port Dover, Port Stanley, Stayner, St. Johns, N. F. and those telegraphed, give the amount of cloudiness by the scale 0 to 4. The elevation of Granton is 1,015 feet, or 309.4 m.; Stratford, 1,182 feet, or 360.3 m

UNITED STATES SERIES.

Furnished by the coöperation of Bvt. Brig. Gen. Albert J. Myer, Chief Signal Officer, U. S. Army.

STATIONS.	Barometer: Corrected for instrum'tal error and temperature. Inches.	Barometer: Corrected for instrum'tal error and temperature. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Albany, N. Y.	.....	.....	30.21	767.3	27	— 2.8	88	S	3	1.3	.....	.....	10s	.....	.....	0	0	Cloudy	
Alpena, Mich.	.....	.....	30.16	766.1	22	— 5.6	72	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Atlantic City, N. J.	.....	.....	30.24	768.1	33	0.6	89	SW	6	2.7	.....	0	0	.....	.....	0	0	Clear	
Augusta, Ga.	.....	.....	30.43	772.9	34	1.1	89	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Baltimore, Md.	.....	.....	30.24	768.1	30	— 1.1	68	Calm	0	0	.....	Haze	Sm'e	.....	.....	0	0	Smoky	
Barnegat, N. J.	.....	.....	30.24	768.1	30	— 1.1	83	SW	9	4.0	.....	0	0	.....	.....	0	0	Clear	
Bismarck, Dakota	28.26	717.8	30.07	763.8	6	—14.4	76	Calm	0	0	.....	.....	Fog	.....	.....	0	0	Foggy	
Boston, Mass.	.....	.....	30.24	768.1	27	— 2.8	88	S	4	1.8	.....	.....	10s	.....	S	0.02	0.5	Cloudy	
Breckenridge, Minn.	.....	.....	30.15	765.8	5	—15.0	100	Calm	0	0	.....	.....	Fog	.....	.....	0	0	Dense fog	
Buffalo, N. Y.	.....	.....	30.15	765.8	27	— 2.8	77	SW	4	1.8	.....	2c	0	.....	.....	0	0	Fair	
Burlington, Vt.	.....	.....	30.22	767.6	30	— 1.1	68	S	4	1.8	.....	.....	10s	.....	.....	0.05	1.3	Cloudy	
Cairo, Ill.	.....	.....	30.35	770.9	36	2.2	70	Calm	0	0	.....	5cs	Fog	.....	.....	0	0	Fair	
Cape Hatteras, N. C.	.....	.....	30.28	769.1	38	3.3	80	N	3	1.3	.....	0	Haze	.....	.....	0	0	Clear	
Cape Henry, Va.	.....	.....	30.29	769.4	34	1.1	79	SW	16	7.2	.....	0	0	.....	.....	0	0	Clear	
Cape Lookout, N. C.	.....	.....	30.37	771.4	40	4.4	100	NW	1	0.4	.....	0	0	.....	.....	0	0	Clear	
Cape May, N. J.	.....	.....	30.23	767.8	35	1.7	80	S	16	7.2	.....	0	0	.....	.....	0	0	Clear	
Charleston, S. C.	.....	.....	30.41	772.4	42	5.6	83	NW	2	0.9	.....	0	Haze	.....	.....	0	0	Clear	
Cheyenne, Wyoming	23.99	609.3	29.93	760.2	35	1.7	52	SW	8	3.6	.....	2ck	8s	.....	.....	0	0	Cloudy	
Chicago, Ill.	.....	.....	30.18	766.6	33	0.6	80	SW	8	3.6	.....	0	0	.....	.....	0	0	Clear	
Cincinnati, Ohio	.....	.....	30.25	768.3	41	5.0	65	SW	4	1.8	.....	2c	Fog	.....	.....	0	0	Fair	
Cleveland, Ohio	.....	.....	30.20	767.1	35	1.7	80	SW	7	3.1	.....	.....	Haze	.....	.....	0	0	Hazy	
Corsicana, Tex.	.....	.....	30.31	769.9	52	11.1	79	S	4	1.8	.....	.....	10s	.....	.....	0.01	0.3	Cloudy	
Davenport, Iowa	.....	.....	30.23	767.8	32	0.0	89	SW	1	0.4	.....	0	4s	.....	.....	0	0	Fair	
Denison, Tex.	.....	.....	30.28	769.1	52	11.1	79	S	4	1.8	.....	.....	10n	.....	.....	0.04	1.0	Light rain	
Denver, Col.	24.79	629.6	30.01	762.2	31	— 0.6	60	S	5	2.2	.....	0	8s	.....	SW	0	0	Fair	
Detroit, Mich.	.....	.....	30.17	766.3	26	— 3.3	76	SW	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Dodge City, Kan.	27.49	698.2	29.84	757.9	38	3.3	100	SW	8	3.6	.....	.....	Fog	.....	.....	0	0	Foggy	
Dubuque, Iowa	.....	.....	30.20	767.1	22	— 5.6	85	Calm	0	0	.....	2c	Haze	.....	.....	0	0	Fair	
Duluth, Minn.	.....	.....	30.09	764.3	27	— 2.8	77	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Eastport, Me.	.....	.....	30.28	769.1	23	— 5.0	86	SE	6	2.7	.....	.....	10n	.....	.....	Inap.	Inap.	Light snow	
Erie, Pa.	.....	.....	30.17	766.3	34	1.1	79	SW	8	3.6	.....	0	Haze	.....	.....	0	0	Clear	
Escanaba, Mich.	.....	.....	30.09	764.3	18.5	— 7.5	76	N	2	0.9	.....	0	0	.....	.....	0	0	Clear	
Fort Gibson, Indian Ter.	.....	.....	30.24	768.1	46	7.8	69	SE	7	3.1	.....	.....	10n	.....	.....	0.06	1.5	Light rain	
Ft. St. Michael, Alaska	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Fort Sill, Indian Ter.	28.98	736.1	30.10	764.5	53	11.7	68	S	10	4.5	.....	.....	10s	.....	.....	0.05	1.3	Cloudy	
Fort Sully, Dakota	28.31	719.1	30.10	764.5	15	— 9.4	82	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Florence, Arizona	28.54	724.9	30.06	763.5	55	12.8	.....	N	.....	.....	.....	8k	0	N	.....	0.10	2.5	Fair	
Galveston, Tex.	.....	.....	30.17	771.4	50	10.0	93	E	2	0.9	.....	2c	0	W	.....	0	0	Fair	
Grand Haven, Mich.	.....	.....	30.16	766.1	33	0.6	89	SW	11	4.9	.....	0	0	.....	.....	0	0	Clear	
Indianapolis, Ind.	.....	.....	30.27	768.8	37	2.8	71	SW	1	0.4	.....	5c	Sm'e	.....	.....	0	0	Fair	
Indianola, Tex.	.....	.....	30.34	770.6	54	12.2	86	E	7	3.1	.....	5c	0	.....	.....	0	0	Fair	
Jacksonville, Fla.	.....	.....	30.39	771.9	44	6.7	83	W	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Keokuk, Iowa	.....	.....	30.20	767.1	38	3.3	80	SW	4	1.8	.....	5c	0	SW	.....	0	0	Fair	
Key West, Fla.	.....	.....	30.24	768.1	60	15.6	81	NE	16	7.2	.....	0	0	.....	.....	0	0	Clear	
Kittyhawk, N. C.	.....	.....	30.36	771.1	35	1.7	90	SW	8	3.6	.....	0	Haze	.....	.....	0	0	Clear	
Knoxville, Tenn.	.....	.....	30.34	770.6	30	— 1.1	89	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
La Crosse, Wis.	.....	.....	30.10	765.1	18	— 7.8	68	S	8	3.6	.....	0	0	.....	.....	0	0	Clear	
Leavenworth, Kan.	.....	.....	30.15	765.8	41	5.0	91	S	4	1.8	.....	.....	10s	.....	.....	0	0	Cloudy	
Louisville, Ky.	.....	.....	30.33	770.4	38	3.3	82	Calm	0	0	.....	5c	Fog	.....	.....	0	0	Fair	
Lynchburg, Va.	.....	.....	30.31	769.9	29	— 1.7	94	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Malone, N. Y.	.....	.....	30.16	766.1	21	— 6.1	85	Calm	0	0	.....	.....	10s	.....	.....	0.03	0.8	Cloudy	
Marquette, Mich.	.....	.....	30.01	762.2	33	0.6	69	W	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Memphis, Tenn.	.....	.....	30.38	771.6	36	2.2	80	S	2	0.9	.....	5c	Sm'e	SW	SW	0	0	Fair	
Milwaukee, Wis.	.....	.....	30.17	766.3	27	— 2.8	88	W	4	1.8	.....	2c	Fog	.....	.....	0	0	Fair	
Mobile, Ala.	.....	.....	30.41	772.4	40	4.4	83	N	4	1.8	.....	0	Fog	.....	.....	0	0	Clear	
Montgomery, Ala.	.....	.....	30.43	772.9	36.5	3.6	86	Calm	0	0	.....	0	Fog	.....	.....	0	0	Clear	
Morgantown, W. Va.	29.16	740.7	30.27	768.8	35	1.7	70	S	2	0.9	.....	0	0	.....	.....	0	0	Clear	
Mt. Washington, N. H.	23.62	597.4	29.85	758.9	11	—11.7	100	NW	18	8.0	.....	.....	Fog	.....	.....	0.07	1.8	Foggy	
Nashville, Tenn.	.....	.....	30.38	771.6	32	0.0	89	Calm	0	0	.....	5c	Fog	.....	.....	0	0	Fair	
New Haven, Conn.	.....	.....	30.22	767.6	28	— 2.2	88	Calm	0	0	.....	2ck	Fog	W	.....	Inap	Inap.	Foggy	
New London, Conn.	.....	.....	30.23	767.8	32	0.0	79	Calm	0	0	.....	5ck	8s	W	W	0.02	0.5	Cloudy	
New Orleans, La.	.....	.....	30.38	771.6	46.5	8.1	85	N	4	1.8	.....	1cs	Sm'e	W	N	0	0	Clear	
Newport, R. I.	.....	.....	30.25	768.3	33	0.6	79	SW	7	3.1	.....	.....	10ks	.....	SW	0.03	0.8	Threatening	
New York, N. Y.	.....	.....	30.24	768.1	28	— 2.2	77	W	5	2.2	.....	0	Sm'e	.....	.....	0	0	Smoky	
Norfolk, Va.	.....	.....	30.30	769.6	33.5	0.8	79	S	9	4.0	.....	0	Sm'e	.....	.....	0	0	Clear	
North Platte, Neb.	27.08	687.8	29.86	758.4	12	—11.1	79	W	8	3.6	.....	0	0	.....	.....	0	0	Clear	
Omaha, Neb.	28.94	735.1	30.04	763.0	38	3.3	71	S	6	2.7	.....	5c	0	SW	.....	0	0	Fair	
Oswego, N. Y.	.....	.....	30.18	766.6	21.5	— 5.8	92	SE	1	0.4	.....	0	Haze	.....	.....	0	0	Clear	
Pembina, Dakota	.....	.....	30.09	764.3	9	—12.8	78	S	3	1.3	.....	0	0	.....	.....	0	0	Clear	
Philadelphia, Pa.	.....	.....	30.25	768.3	29	— 1.7	83	NW	3	1.3	.....	0	Fog	.....	.....	0	0	Fair	
Pike's Peak, Col.	17.73	450.3	29.94	760.5	12	—11.1	42	W	24	10.7	.....	10cs	0	.....	.....	0	0	Cloudy	
Pittsburgh, Pa.	.....	.....	30.20	767.1	38	3.3	71	SW	10	4.5	.....	0	0	.....	.....	0	0	Clear	
Port Huron, Mich.	.....	.....	30.15	765.8	24	— 4.4	95	S	5	2.2	.....	0	Fog	.....	.....	0	0	Fair	
Portland, Me.	.....	.....	30.24	768.1	24	— 4.4	87	W	4	1.8	.....	.....	10s,ha'	.....	.....	0.02	0.5	Cloudy	
Portland, Oregon	.....	.....	29.76	755.9	39	3.9	68	N	3	1.3	.....	5c	0	S	.....	0	0	Fair	
Punta Rassa, Fla.	.....	.....	30.34	770.6	53.5	11.9	86	NE	12	5.4	.....	0	0	.....	.....	0	0	Clear	
Rochester, N. Y.	.....	.....	30.14	765.5	32	0.0	79	W	6	2.7	.....	0	Sm'e	.....	.....	0	0	Clear	
Salt Lake City, Utah.	5.62	650.7	29.95	760.7	23	— 5.0	86	NE	4	1.8	.....	.....	10s	.....	.....	0	0	Cloudy	
Sandy Hook, N. J.	.....	.....	30.19	766.8	33	0.6	73	SW	15	6.7	.....	0	0	.....	.....	0	0	Clear	
San Diego, Cal.	.....	.....	30.14	765.5	54	12.2	93	E	2	0.9	.....	0	2s	.....	SE	0.24	6.1	Cloudy	
San Francisco, Cal.	.....	.....	29.96	761.0	57	13.9	87	S	12	5.4	.....	2k	8ks	.....	SW	0.99	25.1	Cloudy	
Santa Fé, N. M.	23.35	593.1	29.89	759.2	34	1.1	90	Calm	0	0	.....	.....	10s	.....	.....	0	0	Cloudy	
Savannah, Ga.	.....	.....	30.42	772.7	41	5.0	91	Calm	0	0	.....	0	Sm'e	.....	.....	0	0	Smoky	
Shreveport, La.	.....	.....	30.41	772.4	42	5.6	74	Calm	0	0	.....	.....	10s	.....	.....	0	0	Cloudy	
Smithville, N. C.	.....	.....	30.39	771.9	39	3.9	91	N	1	0.4	.....	0	0	.....	.....	0	0	Clear	
Springfield, Mass.	.....	.....	30.23	767.8	29.5	— 1.4	72	S	2	0.9	.....	.....	10s	.....	S	0.01	0.3	Cloudy	
St. Louis, Mo.	.....	.....	30.29	769.4	40	4.4	56	SW	6	2.7	.....	.....	Fog	.....	.....	0	0	Foggy	
St. Marks, Fla.	.....	.....	30.41	772.4	33	0.6	95	N	3	1.3	.....	0	0	.....	.....	0	0	Clear	
St. Paul, Minn.	.....	.....	30.08	764.0	20	— 6.7	85	SW	1	0.4	.....	0	Fog	.....	.....	0	0	Foggy	
St. Paul's Island, Alaska	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Thatcher's Island, Mass.	.....	.....	30.25	768.3	30	— 1.1	78	S	20	8.9	.....	.....	10s	.....	SW	0	0	Cloudy	
Toledo, Ohio	.....	.....	30.21	767.3	37	2.8	71	Calm	0	0	.....	2cs	Haz	.....	.....	0	0	Hazy	
Tucson, Arizona	27.08	703.1	30.23	767.8	48	8.8	.....	E	.....	.....	.....	.....	10ks	.....	W	0.06	1.5	Threatening	
Tybee Island, Ga.	.....	.....	30.40	772.1	43	6.1	91	W	4	1.8	.....	0	Fog	.....	.....	0	0	Clear	
Vicksburg, Miss.	.....	.....	30.43	772.9	42	5.6	65	SE	4	1.8	.....	0	Sm'e	.....	SE	0	0	Clear	
Virginia City, M. T.	24.21	614.9	29.89	754.1	18	— 7.8	68	Calm	0	0	.....	1c	0	.....	.....	0	0	Clear	
Washington, D. C.	.....	.....	30.25	768.3	29.5	— 1.4	84	Calm	0	0	.....	0	Sm'e	.....	.....	0	0	Clear	
Wilmington, N. C.	.....	.....	30.38	771.6	35	1.7	90	SE	3	1.3	.....	0	Sm'e	.....	.....	0	0	Clear	

UNITED STATES SERIES.—CONTINUED.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Wood's Holl, Mass.	.....	.....	30.27	768.8	30	— 1.1	80	S	8	3.6	.....	.....	10s	.....	SE	0.06	1.5	Threatening	
Yankton, Dakota	28.78	731 0	30.15	765.8	21	— 6.1	71	NW	1	0.4	.....	0	0	.....	.....	0	0	Clear	
Yuma, Arizona	.....	.....	30.16	766.1	47	8.3	.....	SW	.....	.....	.....	0	2s	.....	N	0.07	1.8	Fair	
Sub-Series.																			
Kingston, Jamaica, W. I.	.....	.....	30.24	768.1	74	23.3	85	Calm	0	0	.....	8c	8n	N	.....	0.11	2.8	.....	James Gall.
Navassa, W. I.	.....	.....	.....	.....	76	24.4	.....	NE	.....	.....	4	.....	.....	.....	.....	0	0	Cloudy	F. M. Everett.
Clifton, Ja., W. I.	27.27	692.6	30.06	763.5	65	18.3	94	N	1.0	0.4	.....	.....	10k	.....	.....	0.80	20.3	Raining	C. Partridge.
Paramaribo, D. Guiana, S.A.	.....	.....	30.02	762.5	79	26.1	82	E	.....	.....	3	5k	6ks	E	.....	0.510	12.95	½ cloudy	C. J. Hering.
Batavia, Dutch Guiana, S.A.	30.07	763.8	.....	.....	77.0	25.0	.....	E	.....	.....	.....	.....	.....	.....	.....	0	0	Cloudy	Dr. H. Groot.
Medellin, Colombia, S. A.	25.27	641.8	.....	.....	65.5	18.6	84	Calm	.....	.....	0	2cs	6ks	.....	.....	0.13	3.3	Cloudy	Thomas Herran.
York Factory, B. A.	.....	.....	30.14	765.5	6.0	—14.4	88	S	12	5.4	.....	.....	10n	.....	.....	0.07	1.8	Snowing	J. Fortescue, W. Wood
Honolulu, Oahu, H. I.	.....	.....	30.00	762.0	70	21.1	100	SSW	.....	.....	4	.....	.....	.....	.....	0	0	Cloudy	Daniel Smith.
Makawao, Maui, H. I.	.....	.....	29.81	757.2	66	18.9	90	S	.....	.....	2	0	2n	.....	.....	0	0	.....	F. L. Clarke.

NOTE.—The originals give the amount of cloudiness by the scale 0 to 4, except York Factory, Makawao, Medellin and Paramaribo. The elevation of the barometer at Bismarck is 1,677 feet, or 511.1 meters; Cheyenne, 6,057.3 ft., or 1,846.2 m.; Clifton, about 2,892 ft. or 881.5 m.; Denver, 5,135 ft., or 1,565.2 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Florence, 1,550 (?) ft. or 472.5 (?) m.; Makawao, 2,205 ft., or 672.1 m.; Morgantown, 1,027.9 ft., or 313.3 m.; Medellin, 4,876 ft., or 1,486.2 m.; Mt. Washington, 6,285 ft., or 1,915.6 m.; North Platte, 2,846 ft., or 867.4 m.; Omaha, 1,054.6 ft., or 321.4 m.; Pike's Peak, 14,150.7 ft., or 4,313.1 m.; Salt Lake City, 4,302.2 ft., or 1,329.6 m.; Santa Fé, 6,862.2 (?) ft., or 2,091.6 (?) m.; Tucson, 2,513 (?) ft., or 772.1 (?) m.; Virginia City, 5,480 (?) ft., or 1,670.3 (?) m.; Yankton, 1,278 ft., or 389.5 m. The following constants are added in correcting the barometric observations for latitude: Cheyenne, 5.94 inches; Denver, 5.22 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fé, 6.54 in.; Tucson, 2.50 in.; Virginia City, 5.48 in. The elevation of Batavia is about 6 feet; the barometric readings need the addition of 0.2 mm. or 0.01 in. for reduction to sea-level.

UNITED STATES NAVAL SERIES.

By authority of the SECRETARY OF THE NAVY.

Furnished by the coöperation of the Navy Department, through Commodore Daniel Ammen, U. S. N., Chief of Bureau of Navigation.

STATIONS AND VESSELS.	True course toward—	Hourly rate in knots.	*Barometer as reported.		Temperature of the Air.		Relative Humidity.	Wind.			Clouds.				Rain-fall or melted snow in the past 24 hours.		State of Ocean.	Direction of swell from—	Weather.	OBSERVER.
								Direction.	Velocity		Force.	Amount.		Direction.							
												Up'er	Low'r	Up'er	Low'r						
			Inches.	Millimeters.	Fahrenheit.	Centigrade.	Per cent.	From—	Miles per hour.	Meters per second.	0—10.	0—10.	0—10.	From—	From—	Inches.	Millimeters.				
Naval Academy, Annapolis, Md.			29.88	758.9	30	— 1.1	84	SW			1		0			0	0			Clear	
Naval Hospital, Annapolis, Md.			30.25	768.3	29	— 1.7	100	Calm			0		0			0	0			Misty	
Navy Yard, Mare Island, Cal.			30.02	762.5	56	13.3	100	SSW			3		8		NNE	0.405	10.29			Showery	
Navy Yard, Norfolk, Va.			30.42	772.7	32	0.0		SSW			3		0							Blue sky	
Navy Yard, Pensacola, Fla.			30.36	769.6	47	8.3	85	N			2		1			0	0			‡D. clouds.	
Navy Yard, Portsmouth, N.H.			30.21	767.3	24	— 4.4		WSW			2									Cloudy	
Adams,																					
Ajax, Port Royal, S. C.			30.44	773.2	60	10.0	93	N			1		0							Hazy	
Canonicus, Port Royal, S. C.			30.34	770.6	44	6.7		Calm			0		0							Pleasant	
Catskill, New Orleans, La.			30.06	763.5	41	5.0	100	N			1									Foggy	
Colorado, Port Royal, S. C.			30.40	772.1	59	15.0		W			1		0					Smooth		Fair	
Dictator, New York, N. Y.			30.32	770.1	29	— 1.7		W			2		3		E	0	0			Hazy	
Essex, Port Royal, S. C.			30.45	773.4	44	6.7	100	NE			0–1		0			0	0			Clear	
Hartford, Norfolk, Va.			30.30	769.6	36	2.2	100	N			3		0							Blue sky	
Huron, Hampton Roads, Va.			30.40	772.1	37	2.8		SSE			2		1			0	0			Pleasant	
Lehigh, Port Royal, S. C.			30.46	773.7	47	8.3	85	W			0–1		Fog							Blue sky	
Manhattan, Port Royal, S. C.			30.55	776.0†	48	8.9	78	Calm			0		1		S					Pleasant	
Michigan, Erie, Pa.			30.36	771.1†	46	7.8		Calm			0		0					Smooth		Light fog	
Monongahela, Baltimore, Md.			30.11	764.8	31	— 0.6	89	S			1		2							Clear	
New Hampshire, Port Royal, S. C.			30.21	767.3	28	— 2.2		ENE			0–1		..k							Hazy	
Omaha, Panama.			30.62	777.7	51	10.6	93	Calm			0		0					Smooth		Blue sky	
Ossipee, New Orleans, La.			30.10	764.5	76	24.4	88	NW			3		5		SE	0	0	Smooth		Pleasant	
Pensacola, Panama.			30.46	773.7	40	4.4		S			1									Hazy	
Plymouth, Pensacola, Fla.			30.14	765.5	77	25.0	86	NNW			2		3		SSE					‡D. clouds	
¶ Rio Bravo, Matamoras, Mex.			30.42	772.7	54	12.2	74	NNE			3		0			0	0	Smooth		Hazy	
Santee, Annapolis, Md.			29.97	761.2	57	13.9	87	NE			1		4		S					‡D. clouds	
St. Louis, League Island, Pa.			29.82	757.4	32	0.0		SW			1		0							Clear	
Tallapoosa, Washington, D. C.			30.09	764.3	29	— 1.7		Calm			0		1		NW	0	0			Fair	
Wabash, Boston, Mass.			30.12	765.0	28	— 2.2	100	SSW			1		0							Blue sky	
Wyoming, Washington, D. C.			30.32	770.1	27	— 2.8		S			1		10			Blank	Blank			‡D. clouds	
			30.31†	769.9	31	— 0.6		SW			1		0							Blue sky	

* It is not known that the barometer is corrected for temperature, instrumental error or elevation. † Aneroid Barometer. ‡ Detached clouds. ¶ Barometer corrected for instrumental error and reduced to sea-level.

UNITED STATES MARINE SERIES

REPORTED TO THE OFFICE OF THE CHIEF SIGNAL OFFICER OF THE ARMY.

NAMES OF VESSELS.	TRUE COURSE TOWARD—	HOURLY RATE IN KNOTS.	BAROMETER REDUCED TO SEA-LEVEL.		TEMPERATURE OF THE AIR.		RELATIVE HUMIDITY.	WIND.				CLOUDS.				STATE OF OCEAN.	DIRECTION OF SWELL FROM—	WEATHER.	OBSERVER.
								Direction.	Velocity.		Force.	Amount.		Direction.					
												Upper	Low'r	Upper.	Lower.				
			Inches.	Millimeters.	Fahrenheit.	Centigrade.	Per cent.	From—	Miles per hour.	Meters per second.	0—10.	0—10.	0—10.	From—	From—				
PACIFIC MAIL S. S. CO. MARINE SERIES.																			
Furnished by the coöperation of ————, President; Williams, Blanchard & Co., Agents.																			
S. S. City of Peking																			Lt. Z. L. Tanner, U.S.N
OCCIDENTAL AND ORIENTAL S. S. CO. MARINE SERIES.																			
Furnished by the coöperation of George H. Bradbury, President; T. H. Goodman, Agent.																			
S. S. Belgic																			Capt. John Metcalf.
S. S. Gaelic																			Capt. W. H. Kidley.
S. S. Oceanic																			Capt. H. Parsell.
NORTH GERMAN LLOYD OF BREMEN MARINE SERIES.																			
Furnished by the coöperation of A. Schumacher & Co., Agents.																			
S. S. Baltimore																			Capt. H. Andressen.
S. S. Berlin																			Capt. C. Pohle.
S. S. Braunschweig																			Capt. K. Undütsch.
S. S. Nürnberg																			Capt. A. Jaeger.
S. S. Ohio																			Capt. G. Meyer.
MARINE SERIES. (Miscellaneous.)																			
Furnished by the coöperation of Captain James Jorgensen.																			
Schooner Addie Fuller, at Brunswick, Ga			30.35	770.9	52	11.1	79	NNE	2	0.9		0	0					Clear	Capt. James Jorgensen.

NOTE.—The schooner Addie Fuller gives the amount of cloudiness by the scale 0 to 4.

COLLATED AT THE OFFICE OF THE CHIEF SIGNAL OFFICER OF THE ARMY, WASHINGTON, D. C.

The records which appear in this Bulletin are copied from the regular exchanges of this office, made in each instance in compliance with an especial request and are published for the uses of the co-operating observers. The barometric readings in the first two columns are reduced to freezing and their respective standards; those in the second two also to mean sea-level. The "weather" is generally published as given.

When the distinction between the upper and lower strata of clouds is not reported, the *kinds* or *types*, viz: cirrus, cumulus, stratus, nimbus, scud, fracto, pallio, haze, fog and smoke, as indicated, respectively, by the letters c, k, s, n, d, f, p, hz., fg. and sm'e, are generally published with the amount in the lower-cloud column. The distinction between the upper and lower strata is carefully made in the United States Series and a portion of the Canadian Series, and the types are indicated by the above letters or their combinations in the proper column.

Albert J. Myer

Brig. Gen. (Bvt. Asst.,) Chief Signal Officer, U. S. A

BULLETIN

OF

INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON JANUARY 30, 1877.

7:35 A. M. WASHINGTON mean time.

6:7 A. M. MEXICO mean time.
7:7 A. M. SAN JOSE mean time.
0:6 P. M. LISBON mean time.
0:28 P. M. MADRID mean time.
0:43 P. M. GREENWICH mean time.
0:58 P. M. PARIS mean time.
1:1 P. M. BRUSSELS mean time.
1:4 P. M. UTRECHT mean time.
1:18 P. M. BERNE mean time.

1:26 P. M. CHRISTIANIA mean time.
1:33 P. M. COPENHAGEN mean time.
1:33 P. M. ROME mean time.
1:37 P. M. BERLIN mean time.
1:49 P. M. VIENNA mean time.
1:55 P. M. STOCKHOLM mean time.
2:18 P. M. ATHENS mean time.
2:39 P. M. CONSTANTINOPLE mean time.
2:44 P. M. ST. PETERSBURG mean time.

10:2 P. M. TOKEI mean time.

ALGERIAN SERIES.

Furnished by the coöperation of General d'Endeville, Commandant Supérieur du Génie in Algeria.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Nemours	.....	.....	30.39	772.0	62.6	17.0	40	Calm	.....	.....	0	.....	0	.....	.....	0	0	Clear	Charnot.
Algiers	.....	.....	30.30	769.7	63.1	11.7	.....	SW	.....	.....	1	.....	5	.....	.....	Inap.	Inap.	Fair	Peter.
La Calle	.....	.....	30.14	765.6	56.8	13.8	67	N	.....	.....	3	.....	7	.....	.....	0	0	Cloudy	Fleury.
Tunis	.....	.....	29.99	761.8	55.4	13.0	.....	NW	.....	.....	6	.....	6	.....	.....	0.157	4.0	Fair	Jacques.
Sfax	.....	.....																	
Saida	.....	.....																	Millot.
Tebessa	.....	.....	30.35	770.8	56.3	13.5	46	Calm	.....	.....	0	.....	1	.....	.....	0	0	Clear	Bourgeois.
Gerlville	.....	.....	30.12	765.0	39.4	4.1	.....	N	.....	.....	4	.....	2	.....	.....	0	0	Clear	Lemaillot.
Laghouat	.....	.....	30.23	767.9	50.0	10.0	39	N	.....	.....	3	.....	0	.....	.....	0	0	Clear	Guyot.
Biskra	.....	.....	30.24	768.0	59.9	15.5	22	W	.....	.....	1	.....	1	.....	.....	0	0	Clear	Kuntz.
	.....	.....	30.24	768.1	64.6	18.1	23	NW	.....	.....	4	.....	4	.....	.....	0	0	Fair	
	.....	.....																	
	.....	.....																	
	.....	.....																	

NOTE.—In the originals the distinction between the amount of upper and lower clouds is apparently not made. The weather is published as given. The rain-fall is measured at 7 a. m., local time.

AUSTRIAN SERIES.

Furnished by the coöperation of Professor Ferdinand Osnaghi, Director of the Imperial and Royal Central Meteorological Institute at Vienna.

Agram	.....	.....	30.06	763.5	34.3	1.3	74	SW	.....	.....	1	.....	0	.....	.....	0.055	1.4	.....	Prof. Ivan Stozir.
Cracow, I. R. Observatory	.....	.....	29.88	759.0	37.8	3.2	92	W	.....	.....	1	.....	1	.....	.....	0	0	.....	Dr. Wierzbiski.
Eperies	.....	.....	29.97	761.1	30.4	— 0.9	78	S	.....	.....	3	.....	8	.....	N	0.055	1.40	Foggy	Julius Mikolik.
Gratz	.....	.....																	Andreas Rospini.
Hermannstadt	28.71	729.2	30.01	762.2	30.8	2.1	62	SSE	.....	.....	3	.....	0	.....	.....	0	0	.....	Prof. Reissenberger
Kremsmünster	28.54	724.9	30.05	763.2	27.5	— 2.5	77	SE	.....	.....	2	.....	4	.....	.....	0	0	.....	Prof. C. Wagner.
Lemberg	28.52	724.3	29.89	759.2	39.6	4.2	77	NW	.....	.....	1	.....	10	.....	.....	0.217	5.5	.....	Dr. T. Stanecki.
Nyiregyhaza	.....	.....	29.90	759.4	31.1	— 0.5	94	SE	.....	.....	1	.....	8	.....	.....	0	0	.....	
Pola	.....	.....																	Habzsuda Daniel.
Szegedin	.....	.....	30.07	763.7	45.7	7.6	51	WSW	.....	.....	1	.....	2cs	.....	.....	0.046	1.17	.....	I.R.Hydrographic Of'ce.
Trieste	.....	.....	30.07	763.6	31.5	— 0.3	83	S	.....	.....	2	.....	10	.....	.....	0.059	1.50	.....	Karl Stancel.
Vienna	.....	.....	30.09	764.3	43.3	6.3	58	Calm	.....	.....	0	.....	1	.....	.....	0.110	2 8	.....	Prof. V. Farolfi.
	.....	.....	29.93	760.1	33.4	0.8	96	S	.....	.....	1	.....	10	.....	.....	0.169	4.3	Snowing	I. R. Central Met. Obs'y.
	.....	.....																	
	.....	.....																	
	.....	.....																	
	.....	.....																	

NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 7 p. m., local time. The elevation of Gratz is 343.5 meters, or 1,126.9 feet; Hermannstadt, 407.8 meters, or 1,337.9 feet; Kremsmünster, 383.6 meters, or 1,258.5 feet.

BELGIAN SERIES.

Furnished by the cooperation of J. C. Houzeau, Director of the Royal Observatory at Brussels.

Arlon	.....	.....	29.66	753.4	40.1	4.5	94	SW	.....	.....	7	.....	10	.....	.....	0.835	21.2	.....	
Brussels	.....	.....	29.34	745.3	44.6	7.0	89	S	.....	.....	8	.....	10	.....	SW	0.230	5.85	Raining	Royal Observatory.
Furnes	.....	.....	29.35	745.6	45.7	7.6	81	WSW	.....	.....	5	.....	5	.....	.....	0.374	9.5	.....	
Maeseyck	.....	.....	29.24	745.2	44.1	6 7	96	SW	.....	.....	8	.....	10	.....	.....	0.418	10.5	.....	
	.....	.....																	
	.....	.....																	

NOTE.—In the originals, the weather is occasionally given in general notes.

BRITISH SERIES.

Furnished by the cooperation of Robert H. Scott, Esq., Director of the Meteorological Office, London, Alexander Buchan, Secretary of the Scottish Meteorological Society, Edinburgh, and the respective Observers.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Aberdeen			29.15	740.4	37.4	3.0		NW	31	13.9			6			0.720	18.29	Squally	William Boswell.
Ardrossan			29.40	746.7	41	5.0		N			6		5					*D. clouds	William McNeil.
Armagh, Observatory			29.63	752.6	41.6	5.3		WNW	20	8.9			10					Hailing	S. Call, for Dr. Robinson.
Birr Castle, (Parsonstown)			29.81	757.2	43.7	6.5		WNW			5–6		0					Blue sky	J. Dreyer.
Bradford			29.30	744.2	40.6	4.8		W			6		7			1.06	26.9	Squally	J. McLandsborough.
Bridgetown, (Barbados)			30.01	762.2	81.0	27.2		NE			3		7					*D. clouds	Sergt. J. F. Halanen, A.
Cambridge, Observatory			29.37	746.0	46.0	7.8		WNW			5		1					*D. clouds	H. Todd. [H.C.
Cardington			29.42	747.3	44.6	7.0		NW			8		3					*D. clouds	John McLaren.
Carlisle																			T. Bell, for J. Cartmell.
Chatham, School M. E			29.53	750.0	47.2	8.4		SW			4		8					Showery	Maj. C. N. Martin, R.E.
Dartmoor	28.30	718.8	29.83	757.7	39.4	4.1		NW			8		10					Squally	R. E. Power.
Davos Platz, (Switzerland)	24.78	629.4			36.6	2.6	63	Calm			0		2			0.138	3.50	*D. clouds	Francis Redford, M. A.
Donaghadee			29.50	749.3	43	6.1		NW			6		5					*D. clouds	J. Mac Gowan.
Dover			29.42	747.3	45	7.2		W			5		9					Raining	J. Costello.
Eccles, (near Manchester)			29.37	746.0	42.1	5.6		NW	20.6	9.2			10					Hailing	Thomas Mackereth.
Falmouth, Observatory			29.85	758.2	46.7	8.2		NW			6		8					Squally	The Staff.
Fort Napier, (Natal)	27.56	700.0	29.80	756.9	76.2	24.6		E			3		1					Blue sky	P'vt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.91	759.7	87	30.6		NE			1		3					*D. clouds	
Galway, Queen's College			29.78	756.4	45	7.2		W			6		4					*D. clouds	Prof. A. H. Curtis.
Gibraltar, (Mediterranean)			30.43	772.9	61.5	16.4		NE			2		3					*D. clouds	Corpl. C. Aitken, A H.C.
Glasgow, Observatory			29.34	745.2	40.2	4.6		WNW			5		1					Blue sky	Lewis Stuart.
Great Yarmouth			29.18	741.2	44	6.7		WNW			7		3					Squally	G. T. Watson.
Greenwich, Royal Obs'y			29.46	748.3	45.1	7.3		WNW			5		2			Blank	Blank	Blue sky	The Staff, for G. B. Airy.
Guernsey			29.74	755.4	47.5	8.6		NW			7		7					Squally	Dr. S. E. Hoskins.
Helston			29.88	758.9	48	8.9		NW			7		6k			0	0	Fair	M. P. Moyle.
Holyhead			29.59	751.6	43	6.1		WNW			8		3					*D. clouds	John Tilston.
Kew, Observatory			29.48	748.8	46.9	8.3		WNW	26	11.6			5					*D. clouds	The Staff.
Kingstown			29.65	753.1	42	5.6		WNW			7		7					*D. clouds	George Mitchell.
Leicester Museum			29.44	747.8	35.6	2.0		W			8		10					Rain & snow	Wm. J. Harrison, F.G.S.
Malta, (Mediterranean)			29.79	756.7	53.2	11.8		W			3		10					Raining	Corp'l. P. Bravis, A.H.C.
Nairn			29.31	744.5	38	3.3		NW			4		2					¾ clouded	W. D. Penny.
Nassau, (Bahamas)			30.26	768 6	70	21.1		NE			6		2					*D. clouds	Surg. Maj. Henry.
Nottingham, Observatory			29.38	746.2	41.1	5.1		WNW			6		3k,d		WNW	0.196	4.98	Blue sky	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			29.46	748.3	39.4	4.1		W			6–7		8			Blank	lank	Threatening	Rev. Stephen Whitty.
Oxford, Radcliff Obs'y			29.51	749.5	44	6.7		SW			3		10					Drizzling	J. Lucas.
Plymouth			29.77	756.1	47.4	8.6		NW			6		1					*D. clouds	John Merrifield.
Roche's Point			29.85	758.2	46	7.8		NW			6		2					Clear	W. Kennedy.
Saint Ann's Head			29.72	754.9	45	7.2		NW			6		3					*D. clouds	John C. Walker.
Saint Helier, (Jersey)			29.77	756.1	48.6	8.9		WNW			6		10					Overcast	A. P. Amy.
Sandwick Manse, (Orkneys)			29.22	742.2	38.2	3.4		NW	40	17.9			5					Showery	Rev. C. Clouston, LL. D.
Scarborough																			F. Shaw.
Scutari Cemetery, (Turkey)			29.99	761.7	35.0	1.7		NE			1		10					Snowing	Sergt. W. H. Lyne.
Sheffield			29.33	745.0	41.5	5.3		WNW			7		5			0.110	2.94	*D. clouds	W. F. Cooper.
Silloth Rectory			29.36	745.7	42.1	5.6	74	NW			6		0			0	0	Blue sky	Rev. Francis Redford.
Stonyhurst, Observatory			29.36	745.7	35.4	1.9		W			6		10					Raining	Rev. S. J. Perry.
Stornoway, Lews C., (Hebr.)			29.42	747.3	38	3.3		NNW			5		8					*D. clouds	John Smith.
Stratfield Turgiss			29.49	749.0	46.9	8.3		W			3							Showery	Rev. Charles H. Griffith.
Thurso			29.26	743.7	40	4.4		N			6		7					*D. clouds	John Trotter.
Truro, Royal Institution			29.90	759.4	51	10.6		NW			8		6					Gloomy	W. Newcombe.
Valencia, Observatory			30.02	762.5	46.8	8.2		NW	25	11.2			4					*D. clouds	The Staff.
SUB-SERIES.																			
Calf of Man, (isle of Man)					37	2.8		NW			9		10			0	0		Henry Mercer.
Cape Good Hope, Obs'y			29.88	758.9	77.0	25.0	66	NW	14	6.3		0	3						The Staff, for E. J. Stone.
Hobart Town, (Tasmania)			29.71	754.6	72.0	22.2	83	N			3		4k			0	0		Francis Abbott, F.R.A.S.
Leith, Restalrig Park			29.32	744.7	46.9	4.9		NW			5		4k			0.95	24.1	Cloudy	Andrew Gibb.
Mauritius, Observatory			29.67	753.6	82.3	27.9	76	W	12.5	5.6		7	4		W	2.02	51.3	*D. clouds	C. Meldrum.
Melbourne, Observatory			30.00	762.0	58.8	14.9	74	SE	7	3.1			3			0	0	Fine	R. L. J. Emery.
Monach L't-house, (Hebrides)			29.53	750.0	42	5.6		NW			6	5	5	NW		0.4	10.2		J. Youngclause.
North Unst, (Shetland Is.)			29.25	742.9	35	1.7		N			7	4	5	N		Blank	Blank		Robert Burnet.

NOTE.—Generally, the originals do not give the relative humidity, rain-fall, or distinction between upper and lower clouds. The originals give the wind direction to 32 points and weather by the Beaufort notation. The originals give the barometer for Aberdeen, Cardington, Galway, Oxford, St. Helier, Sandwick, Scarborough, Stonyhurst, Leith, Monach and North Unst as read off and the amount of cloudiness for Stornoway by the scale 0 to 4. The wind-force is given by the scale 0 to 12 in the official series; 0 to 6 in the sub-series; except in lbs. per square foot for Greenwich and Hobart Town. The rain-fall is measured at Aberdeen at 10 a. m.; Bradford, 9 a. m.; Hobart Town, 7:30 a. m.; Nottingham, 6 p. m.; Mauritius, 9 a. m., local time. The elevation of Dartmoor is 1,460 feet, or 426.7 meters; Davos Platz, 5,1057 feet, or 1,556.0? meters; Fort Napier, 2,200 feet, or 670.6 meters. *Detached clouds.

By authority of the MINISTER OF FOREIGN AFFAIRS.

COSTA RICA SERIES.

Furnished by the coöperation of Senor Federico Maison, Director of the Central Office of Statistics and Meteorology.

San José																			

DANISH SERIES.

Furnished by the coöperation of Captain N. Hoffmeyer, Director of the Royal Danish Meteorological Institute at Copenhagen.

Copenhagen			29.10	739.0	35.2	1.8	98	SSW			2		10					Raining	
Fanöe			28.93	734.8	39.2	4.0	98	SW			4		10					Raining	
Godthaab, (Greenland)			29.46	748.3	8.2	—13.2	84	W			6		10						
Stykkisholm, (Iceland)			29.35	745.5	20.3	— 6.5	90	E			6		5						
Thorshavn, (Faröe)			29.35	745.5	30.2	— 1.0	78	S			2		5						
Vestervig			28.82	732.1	37.8	3.2	100	S			6		10					Raining	

NOTE.—The originals give the wind-force by the scale 0 to 6; occasionally, weather by Wenna symbols; no distinction between the amount of upper and lower clouds.

FRENCH SERIES.

Furnished by the coöperation of His Excellency, U. J. Le Verrier, Director of the Paris Observatory, and the respective Observers.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er. 0—10.	Clouds. Amount. Low'r. 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall (or melted snow in the past 24 hours). Inches.	Rain-fall (or melted snow in the past 24 hours). Millimeters.	Weather.	Observer.
Alençon	.....	.....	29.76	756.0	44.6	7	89	W	.....	.....	3	.....	10	.....	.....	0	0	Covered	Normal School.
Amiens	.....	.....	29.60	751.7	46.4	8.0	86	SW	.....	.....	3	.....	5	.....	W	0	0	Cloudy.....	Normal School.
Avignon	.....	.....	30.22	767.6	53.6	12	48	NW	.....	.....	2	.....	.....	.....	.....	0	0	.....	Normal School.
Bar-sur-Seine	.....	.....	29.88	759.0	45.9	7.7	75	WSW	.....	.....	10	.....	10	.....	WSW	0.020	0.5	Sprinkling..	C. Saillard.
Beaumette, (near Angers)	.....	.....	29.97	761.3	48.0	8.9	83	SW	50.6	22.6	.....	.....	10	.....	SW	0.268	6.8	Raining.....	Beaumette Observ'tory.
Beauvais	.....	.....	29.61	752.1	46.4	8	85	WSW	.....	.....	6	.....	10	.....	WSW	0.069	1 75	Covered	Normal School.
Besançon	.....	.....	30.11	764.9	44.2	6.8	71	S	.....	.....	4	.....	8	.....	W	0.374	9.5	Very cloudy	Normal School.
Bourg en Bresse	.....	.....	30.20	767.1	43.7	6.5	83	S	.....	.....	2	2c	.....	N	.....	0.228	5.8	Slightly cl'dy	Normal School.
Bourges	.....	.....	30.07	763.7	47.1	8.4	86	SSW	.....	.....	6	.....	5	.....	SSW	0	0	Cloudy.....	Normal School.
Brest	.....	.....	29.87	758 8	49.5	9.7	82	NW	.....	.....	5	.....	10	.....	NW	0.010	0.25	.....	Naval Observatory.
Carcassonne	.....	.....	30.26	768 0	51.1	10.6	65	W	.....	.....	2	.....	2	.....	E	0	0	Slightly cl'dy	Normal School.
Caen	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Chartres	.....	.....	29.54	757.9	43.2	6.2	94	NE	.....	.....	8	.....	10	.....	.....	0.173	4.4	Covered	Normal School.
Châlons-sur-Marne	.....	.....	29.69	754.1	44.6	7.0	80	WSW	.....	.....	8	.....	10	.....	ENE	0.094	2.4	Raining.....	Normal School.
Clermont	.....	.....	30.12	765.1	46.4	8.0	55	SW	.....	.....	4	.....	8	.....	SW	0	0	Very cloudy	Puy de Dome Obs'y.
Commercy	.....	.....	29.80	757.0	42.1	5.6	94	W	.....	.....	6	.....	10	.....	.....	0.374	9.5	Covered	Normal School.
Commune de Gréasque*	.....	.....	30.26	768.6	49.5	9.7	42	W	.....	.....	4	.....	2	.....	W	0	0	.....	M. Kina.
Grenoble	.....	.....	30.22	767.6	42.4	5.8	72	ESE	.....	.....	8	.....	2cs	.....	NE	0.076	1.90	Slightly cl'dy	Normal School.
La Roche-sur-Yon	.....	.....	30.05	763.3	49.3	9.6	86	S	.....	.....	4	.....	10	.....	E	0	0	Covered	Normal School.
Le Mans	.....	.....	29.85	758.3	45.9	7.7	91	W	.....	.....	4	.....	8	.....	W	0.138	3.5	Very cloudy	Normal School.
Lons-Le-Saulnier	.....	.....	30.10	764.4	45.1	7.3	83	NW	.....	.....	4	.....	5	.....	.....	0.087	2.20	Raining.....	Normal School.
Lorient	.....	.....	29.93	760.1	52.5	11.4	83	WSW	.....	.....	6	.....	10	.....	.....	0.295	7.5	Covered	Naval Observatory.
Mâcon	.....	.....	30.11	764.8	43.2	6.2	97	S	.....	.....	2	.....	10	.....	.....	0.04	1.	Covered	Normal School.
Metz	.....	.....	29.80	756.9	42.1	5.6	95	SW	.....	.....	8	.....	10	.....	.....	0.177	4.5	Storm	M. Schuster.
Mirecourt	.....	.....	29.92	759.9	40.3	4.6	90	SSW	.....	.....	6	.....	8	.....	NNE	0	0	Very cloudy	Normal School.
Nismes	.....	.....	30.24	768.2	54.7	12.6	72	SW	.....	.....	2	.....	0	.....	.....	0	0	Clear.....	Normal School.
Orleans	.....	.....	29.85	758.2	46.0	7.8	97	SW	.....	.....	6	.....	10	.....	W	0	0	Covered	Normal School.
Paris, Observatory	.....	.....	29.70	754.4	46.4	8.0	86	SW	.....	.....	10	.....	10n	.....	SW	Inap.	Inap.	Raining.....	National Observatory.
Parthenay	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School..
Privas	.....	.....	30.16	766.1	48.9	9.4	.....	NW	.....	.....	2	.....	2	.....	NW	0	0	Slightly cl'dy	Normal School.
Rochefort, Observatory	.....	.....	30.16	766.0	50.0	10.0	85	WSW	.....	.....	7	.....	10	.....	NE	0	0	Covered	Naval Observatory.
Rouen	.....	.....	29.85	758.1	48.0	8.9	80	SW	.....	.....	2	.....	5	.....	SW	0	0	Cloudy.....	Normal School.
Saint Lo	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Tarbes	29.22	742.3	30.33	770.3	50.9	10.5	81	W	.....	.....	2	.....	5	.....	E	0	0	Cloudy.....	Normal School.
Villefranche	.....	.....	30.39	772.0	39.6	4.2	88	SW	.....	.....	3	.....	5	.....	SW	0.04	1.	Cloudy.....	Normal School.
SUB-SERIES.																			
Fort de France, Martinique	.....	.....	29.92	759.9	72.3	22.4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	L'Abbé Marchési.
Marseilles	.....	.....	30.23	767.9	51.4	10.8	45	W	.....	.....	2	.....	3	.....	.....	0	0	.....	Marseilles Observatory.
Marseilles	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	—. Falguère.
Mont-Louis	25.02	635.4	30.33	770.4	42.1	5.6	33	SW	18.6	8.33	.....	.....	2	.....	NW	0	0	.....	Montsouris Observatory
Montsouris, Paris	.....	.....	29.67	753.5	45.7	7.6	91	SW	.....	.....	6	.....	10	.....	SW	0.008	0.2	.....	Dr. Fines.
Perpignan	.....	.....	30.31	769.8	53.6	12.0	53	W	1.9	0.83	.....	.....	0	.....	.....	0	0	.....	M. Baylac.
Pic du Midi, (Summit,) H. P.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	General de Nansouty.
Pic du Midi, (Plantade,) H. P.	22.62	574.5	.....	.....	30.2	— 1.0	.....	W	.....	.....	5	.....	6	.....	.....	0	0	Fair.....	E. Renou.
Saint Maur, (near Paris)	.....	.....	29.70	754.4	46.4	8.0	86	SW	.....	.....	5	.....	10	.....	.....	0	0	Very cloudy	Toulouse Observatory.
Toulouse	.....	.....	30.33	770.3	48.4	9.1	68	NW	.....	.....	1	.....	4	.....	.....	0.012	0.3	.....	C. Marquet.
Tours	.....	.....	29.94	760.4	47.7	8.7	86	WNW	.....	.....	7	.....	10	.....	W	0	0	.....	Dr. A. Bérigny.
Versailles, (near Paris)	.....	.....	29.68	753.9	46.8	8.2	83	WSW	.....	.....	4	.....	10	.....	.....	0.071	1.80	Raining	Marc Dechevrens, S. J.
Zi-Ka-Wei, (near Shanghai)	.....	.....	30.31	769.8	39.4	4.1	85	E	10.3	4.60	.....	.....	10	.....	.....	0.126	3.2	Rainy.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

NOTE.—Generally, the originals give the wind-force by the scale 0 to 7; no distinction between upper and lower clouds, and, in the official series, the amount by the scale 0 to 4; the rain-fall as measured at 7, 8 or 9 a. m., local time; at Clermont, 9 a. m. of the following day; the weather in general terms as published. The elevation of Clermont is 388 meters, or 1,272.9 feet; Commune de Gréasque, 322 meters, or 1,056.4 feet; Tarbes, 308 meters, or 1,010 feet; Mont-Louis, 1,586.40 meters, or 5,204.8 feet; Pic du Midi, (Summit,) 2,877 meters, or 9,439.1 feet; Pic du Midi, (Plantade,) 2,366 meters, or 7,762.6 feet. In correcting the Mont-Louis barometric observations for altitude, the constant 135. millimeters has been added. *Bouches-du-Rhône

GERMAN SERIES.

Furnished by the coöperation of Professor Dr. G. Neumayer, Director of the German Naval Observatory, Hamburg.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er. 0—10.	Clouds. Amount. Low'r. 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall (or melted snow in the past 24 hours). Inches.	Rain-fall (or melted snow in the past 24 hours). Millimeters.	Weather.	Observer.
Bamberg	.....	.....	29.81	757.2	40.6	4.8	79	SW	.....	.....	5	.....	10	SW	.....	0	0	.....	Prof. T. Hoh.
Berlin	.....	.....	29.42	747.2	42.8	6.0	78	S	.....	.....	3	.....	10	.....	.....	0.157	4.0	Raining.....	Prof. Arndt.
Breslau	.....	.....	29.68	753.9	33.6	0.9	95	S	.....	.....	3	.....	10	.....	.....	0	0	.....	Royal University Obs'y.
Carlsruhe	.....	.....	29.74	755.3	43.9	6.6	77	SW	.....	.....	10	.....	10	.....	.....	0.469	11.9	Raining.....	A. Senz.
Cassel	.....	.....	29.49	749.0	42.1	5.6	78	SW	.....	.....	5	.....	10	W	.....	0.339	8.6	Raining.....	Dr. H. Möhl.
Crefeld	.....	.....	29.29	743.9	45.1	7.3	82	SW	.....	.....	7	.....	10	.....	.....	0.28	7.	Storm.....	Director Lose.
Emden	.....	.....	29.07	738.3	40.4	4.8	100	WSW	.....	.....	8	.....	10	.....	.....	0.248	6.3	.....	Prof. Prestel.
Frankfort on the Main	.....	.....	29.67	753.5	42.1	5.6	85	SSW	.....	.....	6	.....	10	.....	.....	0.520	13.2	.....	Physical Society.
Friedrichshafen	28.52	724.8	29.98	761.6	42.8	6.0	70	W	.....	.....	8	.....	6	.....	.....	0.327	8.3	Rain & snow	M. Wilhelm.
Hamburg	.....	.....	29.19	741.4	42.4	5.8	94	WSW	.....	.....	8	.....	10n	.....	.....	0.218	5.4	Squally.....	Captain F. Hegemann.
Kiel	.....	.....	29.26	743.1	41.4	5.2	92	SW	.....	.....	4	.....	10	.....	.....	0.567	14.4	.....	Prof. G. Karsten.
Königsberg, (Prussia)	.....	.....	29.51	749.6	32.9	0.5	87	S	.....	.....	7	.....	10	.....	.....	0.075	1.9	Snowing.....	Prof. E. Luther.
Köslin	.....	.....	29.38	746.3	33.4	0.8	.....	SW	.....	.....	3	.....	10	.....	.....	0	0	.....	H. Müller.
Leipsic	.....	.....	29.58	751.4	40.8	4.9	79	SSW	.....	.....	5	.....	10	SW	.....	0.185	4.7	.....	Prof. Bruhns.
Memel	.....	.....	29.53	750.0	32.2	0.1	98	SSW	.....	.....	6	.....	Fog	.....	.....	0.083	2.1	Snowing.....	Reinbrecht & Skalweit.
Münster	.....	.....	29.21	742.0	44.2	6.8	91	NW	.....	.....	8	.....	10	.....	.....	0.248	6.3	.....	Prof. E. Heis.
Neuhahrwasser	.....	.....	29.47	748.6	34.2	1.2	85	SSW	.....	.....	5	.....	10	.....	.....	0.047	1.2	Snowing.....	A Lothe.
Posen	.....	.....	29.52	749.7	35.6	2.0	87	S	.....	.....	5	.....	10	.....	.....	0.244	6.2	Snowing.....	Dr. Magener.
Strassburg, (in Alsace)	.....	.....	29.87	758.7	43.5	6.4	78	SW	.....	.....	5	.....	10	SW	.....	0.067	1 7	.....	Dr. Schur.
Stuttgart	.....	.....	29.80	756.9	44.2	6.8	67	W	.....	.....	4	.....	9	.....	.....	0.110	2.8	Rain & snow	Prof. Schoder.
Thorn	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Dr. Hasenbalg.
Treves, (Trier)	.....	.....	29.58	751.3	43.3	6.3	87	SW	.....	.....	9	.....	10	.....	.....	0.433	11.0	Light fog.....	Prof. Flesch.
Weissenburg, (Bavaria)	28.28	718.3	29.82	757.5	38 3	3.5	78	SW	.....	.....	5	.....	10	W	.....	0	0	.....	Dr. von Bebber.
Wustrow, Naval School	.....	.....	29.28	743.8	39.4	4.1	93	SW	.....	.....	4	.....	10	.....	.....	0.181	4.6	Raining.....	E. F. Schütz.
GERMAN NAVAL SERIES.																			
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

NOTE.—The elevation of Friedrichshafen is 413.4 meters, or 1,356.3 feet; Weissenburg, 481 meters, or 1,414.9 ft. In the originals the distinction between the amount of upper and lower clouds is not made. It is not always certain that the remarks in the weather column refer to the moment of observation.

GREEK SERIES.

Furnished by the coöperation of Professor Dr. J. F. Julius Schmidt, Director of the Royal Observatory at Athens.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Athens			30.00	761.9	47.1	8.4		NE					k					Clear	

Note.—The originals give the barometer corrected, but not reduced to sea-level; occasionally the kind of clouds; the weather as published. They omit the humidity, wind-force, amount of cloudiness and rain-fall.

ITALIAN SERIES.

Furnished by the cooperation of His Excellency the Minister of Agriculture, Industry and Commerce, and the respective Observers.

Udine			30.05	763.3	43.2	6.2	30	W	1.3	0.6			3			0	0		Prof. Giovanni Clodgi.
Stelvio	21.99	558.6			21.2	— 6.0		W			1		7	SE		0.547	13.9		Signora Ernesta Manfredi.
Valdobbia	22.05	560.1			20.1	— 6.6	75	SW			8		4	NW				Snowing	Ab. Dom. Mongini.
Padua			30.04	763.1	38.3	3.5	71	NNE	2.5	1.1			7	NNW		0	0		Prof. Dott. Lorenzoni.
Vicenza			30.03	762.7	40.1	4.5	65	E	0	0			3	W		0	0		Conte Alm. Da Schio.
Verona			30.00	762.1	39.9	4.4	87	E			1		0			0	0		Dott. B. Bertoncelli.
Bergamo	28.67	728.3	30.04	763.1	43.9	6.6	39	W			2		3			0	0		Prof Trionfini Carlo.
Domodossola			30.04	763.0	46.2	7.9	40	Calm			0		4			0	0		Prof. Giuseppe Calza.
Milan			30.05	763.3	47.8	8.8	56	NW			1		2	NW		0	0		Ab. Gio. Capelli
Pavia			30.07	763.8	44.4	6.9	50	E			4		2			0	0		Prof. Gio. Cantoni.
Moncalieri			30.07	763.8	44.4	6.9	60	SSE	3.8	1.7			1			0	0		Prof. P. F. Denza.
Mondovi	28.12	714.1	30.10	764.6	40.8	4.9	40	NW			4		1	N		0	0		Prof. D. C. Bruno.
Porto Maurizio			30.08	764.1	52.3	11.3	52	WSW			4		4	NNW		0	0		Prof. L. Vassallo.
Genoa			30.08	764.1	54.1	12.3	42	SE	2.7	1.1			0			0	0		Prof. G. M. Garibaldi.
Piacenza			30.09	764.2	43.7	6.5	47	NW	3.1	1.4			6	WNW		0	0		Dott. G. Manzi.
Parma			30.08	763.9	42.4	5.8	68	SW			2		3			0	0		Prof. P. Pigorini.
Florence			30.11	764.8	47.3	8.5	29	SSW			2		5			0	0		Cav. F. Meucci.
Leghorn			30.11	764.8	50.4	10.2	36	NW	1.5	0.6			10	N		0	0		Prof. P. Monte.
Siena	28.87	733.2	30.12	765.0	46.6	8.1	28	ENE	0	0			3	NE		0	0		Prof. L. Toscani.
Urbino	28.53	724.7	30.17	766.2	37.2	2.9	69	SW			2		0			0	0		Prof. P. Serpieri.
Pesaro			30.11	764.5	43.3	6.3	61	SW	0	0			1	N		0.134	3.4	Raining	Prof. Luigi Guidi.
Ancona			30.07	763.8	45.3	7.4	52	NW			2		1			0.33	8.4	Raining	Prof. F. De— Bosis.
Grosseto			30.13	765.4	50.7	10.4	39	NE			2		2	SE		0.016	0.4	Light rain	Avv. P. Ponticelli.
Rome			30.09	764.3	52.3	11.3	56	NW	11.2	5.0			0			0	0		Prof's. P. Secchi & L. Respighi.
Naples, O. U			30.07	763.8	51.4	10.8	43	ESE			8		2			0.946	24.0	Thunder-storm	Prof. L. Palmieri.
Lecce			30.02	762.5	48.9	9.4	47	N	21.0	9.4			5			0	0		Prof. C. De—Giorgi.
Cosenza			30.06	763.4	46.9	8.3	81	ENE	9.4	4.2			7			0.354	9.0	Raining	Prof. F. D. Conti.
Cagliari																			Prof. A. Pacinotti.
Riposto, (Sicily)			29.92	759.9	53.6	12.1	55	N			4		8	N		0	0		Prof. F. Cafiero.
Palermo			29.97	761.2	52.9	11.6	62	N	21.0	9.4			9			0.339	8.6	Thunder-storm	Prof. G. Cacciatore.
Caltanissetta	27.93	709.3	29.93	760.3	44.2	6.8	79	NNW			6		10	S		0.27	6.9	Raining	Prof. A. Pagani.
Siracusa			29.79	756.7	54.0	12.2	74	ENE			8		10	ENE		0.083	2.1	Raining	Prof. V. Giuliano.
Sub-Series.																			
Naples, S. R.			30.10	764.4	48.2	9.0	52	WSW	4.9	2.2			2	SE		0.634	16.1		Prof. F. Brioschi.

Note.—The originals give the wind-force by the scale 0 to 4, or the velocity in kilometers per hour; generally, no distinction between upper and lower clouds; occasionally the weather by the Vienna symbols. The elevation of Stelvio is 2,543.0 meters, or 8,342.9 feet; Valdobbia, 2,548.9 meters or 8,359.3 feet; Bergamo, 379.6 meters, or 1,244.8 feet; Mondovi, 556 meters, or 1,824.2 feet; Siena, 348.5 meters, or 1,143.3 feet; Urbino, 451 meters, or 1,479.7 feet; Caltanissetta, 570.3 meters, or 1,871.0 feet.

JAPANESE SERIES.

Furnished by the coöperation of the Imperial University of Tokei, Japan.

Tokei			29.82	757.4	32.6	0.3		Calm	0	0			0			0.642	16.31		Prof. P. V. Veeder.

Note.—The originals give the amount of cloudiness by the scale 0 to 4 without distinguishing between upper and lower clouds. The rain-fall is measured at 7 a. m., local time

By authority of the Secretary of Public Works.

MEXICAN SERIES.

Furnished by the coöperation of Senor Mariano Barcena, Director of the Central Meteorological Observatory in the City of Mexico.

Mexico																			Mariano Barcena. Vicente Reyes. Miguel Perez. (Engineers in charge.)

Note.—The elevation of Mexico is 2,290 meters, or 7,512.9 feet. The rain-fall is measured at 6 a. m., local time.

NETHERLANDS' SERIES.

Furnished by the cooperation of Professor Buys Ballot, Director of the Royal Meteorological Institute of the Netherlands at Utrecht.

Flushing			29.32	744.7	43.5	6.4		W			6					0.091	2.3		
Groningen			28.92	734.5	42.8	6.0		S			8					0.248	6.3		
Heider			29.04	737.6	46.4	8.0		WSW			8					0.322	8.2		
Utrecht			29.11	739.5	44.2	6.8	86	SW			8		10			0.398	10.1	Dull	

Note.—The originals give the wind-pressure in kilograms per square meter; for Utrecht, they give the weather as published, from which the amount of cloudiness is taken by the scale 0 to 4, without distinguishing between upper and lower clouds. It is assumed that the barometer readings have been reduced to sea-level.

NORWEGIAN SERIES.

Furnished by the coöperation of Professor H. Mohn, Director of the Royal Norwegian Meteorological Institute at Christiania.

Bergen			28.98	736.0	34.5	1.4	93	SSW	4.3	1.9			10			0.028	0.7	Raining	
Brönö			28.47	723.0	33.8	1.0	90	S	17.9	8			10					Snowing	
Christiania			29.02	737.2	32.5	0.3	85	SSW	0	0			8			0	0		
Tromsö			28.61	726.6	31.6	— 0.2	58	SE	4.5	2			2			0.047	1.2		

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols. The cloudiness and weather at Bergen refer to 2h., p. m., local time, instead of 1h., 4 m.

PORTUGUESE SERIES.

Furnished by the coöperation of J. C. de Brito Capello, Director of the Meteorological Observatory of the Infante Don Luiz at Lisbon.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Upper. 0—10.	Clouds. Amount. Low'r. 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Angra, (Azores)	.....	.....	30.55	776.0	56.8	13.8	82	SE	5.6	2.5	.....	.....	7	.....	.....	0	0	.....	Dr. J. A. Sampaio
Campo Major	.....	.....	30.40	773.7	59.0	15.0	48	NE	4.6	1.81	.....	.....	2	.....	.....	0	0	.....	Dr. A. M. R. dos Santos.
Funchal, (Madeira)	.....	.....	30.47	774.0	66.9	19.4	61	SSE	2.2	0.97	.....	.....	1	.....	.....	0	0	.....	Capt. D. A. de Cunha.
Lisbon	.....	.....	30.51	775 0	57.9	14.4	63	NNE	7.4	3.3	.....	.....	1	.....	.....	0	0	.....	The Observatory.
Ponta Delgada, (Azores)	.....	.....	30.56	776.1	61.5	16.4	77	ESE	3.1	1.4	.....	.....	6	.....	.....	0	0	.....	
.....																			

Note.—The originals give the wind-velocity in kilometers per hour; occasionally, the weather by the Vienna symbols; the amount of cloudiness without distinguishing between upper and lower clouds; the barometer corrected but not reduced to sea-level. The rain-fall at Lisbon is measured at noon, instead of 0 h. 6 m., p. m.

RUSSIAN SERIES.

Furnished by the cooperation of Professor H. W ld, Director of the Imperial Central Physical Observatory of Russia, at St. Petersburg.

Warsaw	.....	.....	29.71	754.7	34.3	1.3	75	SSE	18	8	.....	.....	5	.....	.....	.....	.....	Solar corona	Astronomical Obs.
Wilna	.....	.....	29.74	755.5	27.7	— 2.4	80	S	2	1	.....	.....	2	.....	.....	.....	.....	.....	Astronomical Obs.
Dorpat	.....	.....	29.58	751.3	30.7	— 0.7	89	S	11	5	.....	.....	10	.....	.....	.....	.....	.....	Physical Cabinet.
St. Petersburg	.....	.....	29.62	752.4	21.6	— 6.1	93	S	18	8	.....	.....	10	.....	.....	.....	.....	.....	Central Physical Obs.
Kuopio	.....	.....	29.25	743.0	29.3	— 1.5	.....	S	22	10	.....	.....	10	.....	.....	.....	.....	Snowing.....	Ch. Forsten.
Kieff	.....	.....	30.09	764.2	5.6	—15 0	100	SSE	9	4	.....	.....	3	.....	.....	.....	.....	.....	Physical Cabinet.
Nikolaiev	.....	.....	30.14	765.5	14.2	— 9.9	80	ENE	9	4	.....	.....	0	.....	.....	.....	.....	.....	Kurdakof.
Kertch	.....	.....	30.04	763.1	25.9	— 3.4	80	NNW	9	4	.....	.....	7	.....	.....	.....	.....	.....	Lagorio.
Moscow	.....	.....	30.18	766.5	7.7	—13.5	67	S	4	2	.....	.....	0	.....	.....	.....	.....	.....	Meteorological Obs.
Lugan	.....	.....	30.15	765 7	16.7	— 8.5	73	ENE	22	10	.....	.....	10	.....	.....	Blank	Blank	.....	Meteorological Obs.
Archangel	.....	.....	29.54	750.4	15.4	— 9.2	94	?	22	10	.....	.....	10	.....	.....	.....	.....	.....	Ogorodnikof.
Tiflis	28.80	731.4	30.30	769.5	32.5	0.3	87	Calm	0	0	.....	.....	10	.....	.....	.....	.....	.....	Physical Observatory.
Astrakhan	.....	.....	30.35	771.0	20.5	— 6.4	45	E	13	6	.....	.....	0	.....	.....	.....	.....	.....	Sebastianof.
Kasan	.....	.....	30.31	769.9	7.3	—13.7	50	SSW	9	4	.....	.....	8	.....	.....	.....	.....	.....	Physical Cabinet.
Orenburg	.....	.....	30.10	764.5	— 2.2	—19.0	70	E	16	7	.....	.....	0	.....	.....	.....	.....	.....	Tschernischei.
Ekaterinburg	29.24	742.6	30.30	769.6	— 2.7	—19.3	78	WSW	4	2	.....	.....	9	.....	.....	.....	.....	.....	Meteorogical Obs.
Nukuss	.....	.....	30.56	776.1	7.5	—13.6	47	NE	4	2	.....	.....	0	.....	.....	.....	.....	.....	
Kasaly	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Tashkend	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Bobrof.
Barnaul	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Michelson.
Yeniseisk	.....	.....	30.72	780.2	—12 5	—24.7	84	S	9	4	.....	.....	2	.....	.....	.....	.....	.....	Meteorological Obs.
Irkutsk	.....	.....	30.56	776.1	—19.5	—28.6	78	ESE	2	1	.....	.....	7	.....	.....	.....	.....	Snowing.....	Marks.
Peking, (China)	.....	.....	30.38	771.7	25.5	— 3.6	80	Calm	0	0	.....	.....	2	.....	.....	.....	.....	.....	Usolzef.
Nertchinsk	28.19	716.1	30.67	779.0	—28.5	—33.6	94	Calm	0	0	.....	.....	0	.....	.....	.....	.....	.....	Physical Observatory.
Vladivostock	.....	.....	30.07	763.8	17.8	— 7.9	62	Calm	0	0	.....	.....	0	.....	.....	.....	.....	.....	Meteorological Obs.
Nikolaievsk, on the Amoor	.....	.....	.....	.....	26.2	— 3.2	.....	E	2	1	.....	.....	10	.....	.....	.....	.....	.....	
.....																			
.....																			
.....																			

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols; they omit the rain-fall. The elevation of Tiflis is 409 meters, or 1,341.8 feet; Ekaterinburg, 306.4? m., or 1,005.2? ft.; Tashkend, 494.2? m., or 1,621.3? ft.; Irkutsk, 392 m., or 1,286 ft.; Nertchinsk, 592.0? m., or 1,942.2? ft.

SPANISH SERIES.

Furnished by the cooperation of Antonio Aguilar, Director of the Royal Observatory at Madrid, and of Don Cecilio Pujazon, Captain R. N. Director of the Naval Observatory at San Fernando.

Madrid	.....	.....	30.49	774.5	48.6	9.2	65	S	2.2	1.00	.....	2	0	NE	.....	0	0	Light clouds	Royal Observatory.
San Fernando	.....	.....	30.47	773.8	65.1	18.4	49	ESE	11.2	5.0	.....	5	2	ESE	ESE	.....	.....	.....	Naval Observatory.
.....																			
.....																			
.....																			
.....																			

Note.—The originals give the weather in general terms, as published; rain-fall for San Fernando from preceding to following midnight; wind-velocity for Madrid in kilometers per hour.

SWEDISH SERIES.

Furnished by the cooperation of Professor R. Rubenson, Director of the Royal Swedish Meteorological Institute, at Stockholm, and of Dr. H. H. Hildebrandsson, Chief of the Meteorological Division of the Upsala Observatory.

Haparanda	.....	.....	28.99	736.4	26.6	— 3.0	96	S	.....	.....	4	.....	10	.....	.....	0	0	.....	
Umea	.....	.....	28.95	735.2	31.5	— 0.3	98	SW	.....	.....	4	.....	10	.....	.....	0.071	1.8	.....	
Hernosand	.....	.....	28.89	733.7	33.6	0.9	92	SSW	.....	.....	4	.....	9	.....	.....	0.035	0.9	Snowing.....	
Stockholm	.....	.....	29.15	740.4	34.2	1.2	89	WSW	.....	.....	4	.....	8	.....	.....	0.039	1.0	.....	
Wisby	.....	.....	29.31	744.5	33.8	1.0	89	WSW	.....	.....	4	.....	10	.....	.....	0.138	3.5	.....	
Sub-Series.																			
Upsala	.....	.....	29.12	739.6	34.2	1.2	77	SSW	17.2	7.7	.....	.....	10	.....	SW	0.002	0.04	.....	Dr. Hildebrandsson.
.....																			

Note.—The originals give the wind-force by the scale 0 to 6, and Upsala also velocity in meters per second; occasionally, the weather by the Vienna symbols, or in general terms; no distinction between the amount of upper and lower clouds. The rain-fall is measured at 8 a. m., local time.

SWISS SERIES.

Furnished by the coöperation of Professor R. Wolf, Director of the Observatory at Zurich, and of Professor E. Plantamour, Director of the Observatory at Geneva.

STATIONS.	Barometer. Corrected for instrumental error and temperature. Inches.	Barometer. Corrected for instrumental error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Upper. 0—10.	Clouds. Amount. Lower. 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Geneva	28.65	727.7	30.11	764.8	43.2	6.2	59	SSW	.....	.....	4	.....	7	.....	.....	0.039	1.0	Vapory	The Observatory.
Zurich	28.34	719.8	30.02	762.5	41.7	5.4	67	W	.....	.....	4	.....	7	.....	.....	0.394	10.0	Cloudy	The Observatory.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Note.—For Geneva the corresponding departures from the normal values are: Barometer, +0.5 mm; Thermometer, +4.0 cent.; Relative Humidity, —17 per cent.

Note.—The rain-fall is measured at Zurich at 7 a. m. on the following day. The originals give the barometer corrected but not reduced to sea-level; the wind-force by the scale 0 to 4 for Zurich; the amount of cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The elevation of Geneva is 408 meters, or 1,339 feet, and that of Zurich 470 meters, or 1,542 feet.

TURKISH SERIES.

Furnished by the coöperation of A. Coumbary, Effendi, Director of the Central Observatory at Constantinople, and of Professor C. V. A. Van Dyck, Superintendent of the Lee Observatory at Beirut.

Constantinople	.....	.....	30.02	762.5	35.6	2.0	82	N	15	6.5	.....	.....	10	.....	NE	Inap.	Inap.	.....	
Fao, (Persian Gulf)	.....	.....	30.35	771.0	58.6	14.8	.....	SE	.....	.....	3	.....	10	.....	.....	.....	.....	.....	
Salonica	.....	.....	30.06	763.4	45.1	7.3	.....	NE	.....	.....	2	.....	0	.....	.....	.....	.....	.....	
Valona	.....	.....	29.88	759 0	50.4	10.2	.....	NW	.....	.....	2	.....	0	.....	.....	.....	.....	.....	
Varna	.....	.....	29.96	761.0	32.0	0.0	.....	W	.....	.....	2	.....	10	.....	.....	.....	.....	.....	
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y	.....	.....	29.76	755.8	61.5	16.4	65	N	.....	.....	3	.....	5c	.....	.....	0	0	*D. clouds	Prof. C. V. A. Van Dyck.

Note.—The originals give the wind-force by the scale 0 to 7, (except Beirut, by the scale 0 to 12, and Constantinople velocity in meters per second;) the weather in genera terms as published; no distinction between upper and lower clouds, and, except Constantinople and Beirut, the amount by the scale 0 to 4. It is assumed that the barometer is reduced to sea-level. * Detached clouds.

CANADIAN SERIES.

Furnished by the cooperation of Professor G. T. Kingston, Director of the Magnetic Observatory at Toronto, and Superintendent of the Meteorological Office of the Dominion of Canada, and the respective Observers. Those marked with a star (*) are also telegraphed daily to the office of the Chief Signal Officer, U. S. Army.

Bathurst, N. B	.....	.....	30.20	767.1	11.6	—11.3	74	Calm	0	0	.....	.....	0	.....	.....	.....	.....	.....	Hon. J. Ferguson.
Brockville, Ontario	.....	.....	30.48	774.2	25	— 3.9	.....	Calm	0	0	.....	.....	10s	.....	.....	0	0	Cloudy	W. R. Bigg.
*Chatham, N. B	.....	.....	30.21	767.3	14	—10.0	93	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	G. A. Blair.
Charlottetown, P. E. Island	.....	.....	30.20	767.1	23	— 5.0	93	Calm	0	0	.....	.....	10ks	.....	.....	0	0	Cloudy	H. J. Cundall, C. E.
Cornwall, Ontario	.....	.....	30.50	774.7	23.5	— 4.7	87	N	.....	.....	1	.....	10s	.....	.....	0	0	Dull	James Smith, M. A.
Dalhousie, N. B	.....	.....	30.22	767.6	24.5	— 4.2	81	W	.....	.....	1	.....	.....	.....	.....	0	0	Overcast	H. A. Johnson.
Esquimault, B. C	.....	.....	29.70	754.4	47.3	8.5	92	NE	.....	.....	.....	.....	10n	.....	.....	0.68	17.3	Raining	W. H. Bevis.
*Father Point, Quebec	.....	.....	30.28	769.1	23	— 5.0	86	SW	2	0.9	.....	2cs	2s	.....	.....	0	0	Fair	J. McWilliams.
Fredericton, N. B	.....	.....	30.32	770.1	20.5	— 6.4	85	W	1	0.4	.....	.....	10s	.....	N	Inap.	Inap.	Cloudy	Prof. Harrison.
*Fort Garry, Manitoba	.....	.....	30.05	763.3	10	—12.2	96	S	4	1.8	.....	0	0	.....	.....	0	0	Clear	James Stewart.
Goderich, Ontario	.....	.....	30.47	773.9	23.9	— 4.5	79	Calm	.....	.....	0	0	0	.....	.....	0	0	Very fine	H. J. Strang, M. A.
Granton, Ontario	29.28	743.7	30.46	773.7	22.3	— 5.4	.....	E	.....	.....	1	0	0	.....	.....	0	0	Clear	James Grant.
*Halifax, N. S	.....	.....	30.25	768.3	25	— 3.9	87	SW	12	5.4	.....	.....	10n	.....	.....	0	0	Cloudy	F. Allison, M. A.
Hamilton, Ontario	.....	.....	30.50	774.7	20.3	— 6.5	91	NE	.....	.....	1	10cs	0	.....	.....	0	0	Hazy	G. Dickson.
Heart's Content, N. F	.....	.....	30.11	764.8	9	—12.8	100	SE	.....	.....	1	0	0	.....	.....	0	0	Fine	E. Weedon.
*Kingston, Ontario	.....	.....	30.52	775.2	27	— 2.8	84	Calm	0	0	.....	10cs	0	.....	.....	0	0	Cloudy	S. Woods, M. A.
*Montreal, Quebec	.....	.....	30.48	774.2	18	— 7.8	95	N	.....	.....	.....	.....	Fog	.....	.....	0.03	0.8	Foggy	C. H. McLeod, C. E.
*Ottawa, Ontario	.....	.....	30.52	775.2	24	— 4.4	74	W	4	1.8	.....	.....	10n	.....	W	0	0	Threatening	J. B. Haney.
*Parry Sound, Ontario	.....	.....	30.48	774.2	26	— 3.3	88	E	5	2.2	.....	.....	10n	.....	E	0	0	Cloudy	Rev. R. Mosley.
Port Dover, Ontario	.....	.....	30.48	774.2	18	— 7.8	98	N	6	2.7	.....	0	0	.....	.....	0	0	Clear	H. Morgan.
Port Hastings, N. S	.....	.....	30.31	769.9	24.7	— 4.1	.....	Calm	0	0	.....	.....	.....	.....	.....	0	0	Fine	Peter Grant
Port Stanley, Ontario	.....	.....	30.47	773.9	12	—11.1	96	E	6	2.7	.....	0	0	.....	.....	0	0	Clear	M. Payne.
*Quebec, Quebec	.....	.....	30.42	772.7	21	— 6.1	85	Calm	0	0	.....	.....	10n	.....	.....	0.10	2.5	Cloudy	Capt. Ashe, R. N.
*Rockliffe, Ontario	.....	.....	30.50	774.7	25	— 3.9	100	Calm	0	0	.....	.....	10s	.....	N	0	0	Cloudy	.....
St. John, N. B	.....	.....	30.34	770.6	25.0	— 3.9	87	W	2	0.9	.....	10ks?	0	.....	.....	0	0	Overcast	G. Murdoch, C. E.
*Saugeen, Ontario	.....	.....	30.44	773.2	22	— 5.6	86	Calm	0	0	.....	2k	0	E	.....	0	0	Clear	K. Stewart.
Stayner, Ontario	.....	.....	30.50	774.7	20	— 6.7	98	SE	5	2.2	.....	.....	Fog	.....	SE	0	0	Foggy	R. J. Cole.
Stratford, Ontario	29.10	739.1	30.49	774.4	16.0	— 8.9	98	Calm	0	0	.....	0	Fog	.....	.....	0	0	Fine	C. J. MacGregor, M. A.
*Sydney, C. B	.....	.....	30.20	767.1	17	— 8.3	87	SW	3	1.3	.....	10 c	0	W	.....	0	0	Cloudy	T. C. Hill.
*Toronto, Ontario	.....	.....	30.50	774.7	24	— 4.4	95	NE	5	2.2	.....	.....	0k	.....	SE	0	0	Cloudy	Magnetic Observatory.
Woodstock, Ontario	.....	.....	30.52	775.2	11.6	—11.3	100	S	3	1.3	.....	0	0	.....	.....	0	0	Clear	J. Montgomery.
Sub-Series.																			
St. Johns, Newfoundland	.....	.....	30.16	766.1	10.0	—12.0	79	NW	.....	.....	.....	2c	5s	.....	.....	0	0	Fair	John Delany
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Note.—The originals for Brockville, Charlottetown, Port Dover, Port Stanley, Stayner, St. Johns, N. F. and those telegraphed, give the amount of cloudiness by the scale 0 to 4. The elevation of Granton is 1,015 feet, or 309.4 m.; Stratford, 1,182 feet, or 360.3 m

UNITED STATES SERIES.

Furnished by the coöperation of Bvt. Brig. Gen. Albert J. Myer, Chief Signal Officer, U. S. Army.

STATIONS.	Barometer: Corrected for instrum'tal error and temperature. Inches.	Barometer: Corrected for instrum'tal error and temperature. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather	Observer.
Albany, N. Y.	.....	.....	30.42	772.7	18	— 7.8	84	Calm	0	0	.....	Haze	Haz	.....	.....	0	0	Hazy	.....
Alpena, Mich.	.....	.....	30.46	773.7	27	— 2.8	100	SE	6	2.7	.....	.....	Fog	.....	.....	0	0	Foggy	.....
Atlantic City, N. J.	.....	.....	30.41	772.4	30	— 1.1	89	SE	4	1.8	.....	0	0	.....	.....	0	0	Clear	.....
Augusta, Ga.	.....	.....	30.41	772.4	40	4.4	86	Calm	0	0	.....	.....	10s	.....	.....	0	0	Cloudy	.....
Baltimore, Md.	.....	.....	30.41	772.4	35	1.7	80	NE	4	1.8	.....	Haze	Sm'c	.....	.....	0	0	Smoky	.....
Barnegat, N. J.	.....	.....	30.39	771.9	29	— 1.7	89	NW	7	3.1	.....	0	Haze	.....	.....	0	0	Clear	.....
Bismarck, Dakota	28.17	715.5	29.96	761.0	8	—13.3	78	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	.....
Boston, Mass.	.....	.....	30.40	772.1	29	— 1.7	83	Calm	0	0	.....	10cs	Sm'c	.....	.....	0	0	Smoky	.....
Breckenridge, Minn.	.....	.....	30.06	763.5	19	— 7.2	100	SE	6	2.7	.....	.....	Fog	.....	.....	0	0	Dense fog	.....
Buffalo, N. Y.	.....	.....	30.46	773.7	23	— 5.0	73	SE	3	1.3	.....	0	0	.....	.....	0	0	Clear	.....
Burlington, Vt.	.....	.....	30.49	774.4	25	— 3.9	65	N	1	0.4	.....	0	8s	.....	.....	0.02	0.5	Cloudy	.....
Cairo, Ill.	.....	.....	30.38	771.6	44	6.7	75	E	1	0.4	.....	0	8s	.....	.....	0	0	Fair	.....
Cape Hatteras, N. C.	.....	.....	30.28	769.1	46	7.8	76	W	6	2.7	.....	2c	0	.....	.....	0	0	Fair	.....
Cape Henry, Va.	.....	.....	30.40	772.1	39	3.9	91	Calm	0	0	.....	2c	0	.....	.....	0	0	Fair	.....
Cape Lookout, N. C.	.....	.....	30.36	771.1	45	7.2	76	NW	5	2.2	.....	2c	5s	NW	.....	0	0	Fair	.....
Cape May, N. J.	.....	.....	30.40	772.1	33	0.6	79	NW	5	2.2	.....	0	0	.....	.....	0	0	Clear	.....
Charleston, S. C.	.....	.....	30.41	772.4	48	8.9	70	SW	6	2.7	.....	2c	5s	NW	W	0	0	Fair	.....
Cheyenne, Wyoming	24.00	609.6	29.94	760.5	33	0.6	69	W	20	8.9	.....	8c	1s	W	W	0	0	Fair	.....
Chicago, Ill.	.....	.....	30.32	770.1	43	6.1	92	S	1	0.4	.....	.....	Fog	.....	.....	0	0	Foggy	.....
Cincinnati, Ohio	.....	.....	30.37	771.4	42	5.6	65	Calm	0	0	.....	.....	Fog	.....	.....	0	0	Foggy	.....
Cleveland, Ohio	.....	.....	30.45	773.4	27.5	— 2.5	77	SE	4	1.8	.....	2c	5s	.....	.....	0	0	Fair	.....
Corsicana, Tex.	.....	.....	30.28	769.1	53	11.7	79	S	7	3.1	.....	.....	10s	.....	.....	0	0	Cloudy	.....
Davenport, Iowa	.....	.....	30.26	768.6	42	5.6	91	SE	4	1.8	.....	.....	10s	.....	.....	0	0	Cloudy	.....
Denison, Tex.	.....	.....	30.26	768.6	52	11.1	93	S	7	3.1	.....	.....	10n	.....	.....	0.11	2.8	Light rain	.....
Denver, Col.	24.79	629.6	30.01	762.2	29	— 1.7	59	NW	4	1.8	.....	0	0	.....	.....	0	0	Clear	.....
Detroit, Mich.	.....	.....	30.41	772.4	28	— 2.2	88	N	3	1.3	.....	.....	Fog	.....	.....	0	0	Foggy	.....
Dodge City, Kan.	27.44	697.0	29.80	756.9	37	2.8	80	W	8	3.6	.....	0	2s	.....	SW	0	0	Fair	.....
Dubuque, Iowa.	.....	.....	30.24	768.1	39	3.9	91	Calm	0	0	.....	.....	Fog	.....	.....	0	0	Foggy	.....
Duluth, Minn.	.....	.....	30.16	766.1	36	2.2	80	E	4	1.8	.....	.....	10s	.....	.....	0	0	Cloudy	.....
Eastport, Me.	.....	.....	30.31	769.9	24	— 4.4	87	NW	7	3.1	.....	0	5s	.....	NW	0.03	0.8	Fair	.....
Erie, Pa.	.....	.....	30.45	773.4	28	— 2.2	88	S	7	3.1	.....	0	Fog	.....	.....	0	0	Clear	.....
Escanaba, Mich.	.....	.....	30.34	770.6	20	— 6.7	85	N	2	0.9	.....	.....	Fog	.....	N	0	0	Foggy	.....
Fort Gibson, Indian Ter.	.....	.....	30.19	766.8	55	12.8	55	S	10	4.5	.....	.....	10s	.....	SW	0.19	4.8	Cloudy	.....
Ft. St. Michael, Alaska	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Fort Sill, Indian Ter.	28.97	735.8	30.08	764.0	56	13.3	57	S	16	7.2	.....	10cs	0	SW	.....	0	0	Cloudy	.....
Fort Sully, Dakota	28.23	717.0	29.99	761.7	19	— 7.2	84	NE	4	1.8	.....	2c	0	.....	.....	0	0	Fair	.....
Florence, Arizona	28.57	725.7	30.11	764.8	54	12.2	.....	NW	.....	.....	.....	0	0	.....	.....	0	0	Clear	.....
Galveston, Tex.	.....	.....	30.34	770.6	57	13.9	93	E	6	2.7	.....	.....	10s	.....	S	0	0	Cloudy	.....
Grand Haven, Mich.	.....	.....	30.36	771.1	35	1.7	85	E	3	1.3	.....	.....	10s	.....	.....	0	0	Cloudy	.....
Indianapolis, Ind.	.....	.....	30.39	771.9	38	3.3	71	Calm	0	0	.....	2cs	Sm',fg'	.....	.....	0	0	Smoky	.....
Indianola, Tex.	.....	.....	30.31	769.9	55	12.8	93	E	5	2.2	.....	2ck	5s	E	.....	0	0	Fair	.....
Jacksonville, Fla.	.....	.....	30.41	772.4	45	7.2	92	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	.....
Keokuk, Iowa.	.....	.....	30.17	766.3	44	6.7	84	SE	4	1.8	.....	.....	10s	.....	SE	0	0	Cloudy	.....
Key West, Fla.	.....	.....	30.30	769.6	65	18.3	90	NE	16	7.2	.....	0	0	.....	.....	0	0	Clear	.....
Kittyhawk, N. C.	.....	.....	30.37	771.4	39	3.9	100	N	7	3.1	.....	2k	Haze	NW	.....	0	0	Fair	.....
Knoxville, Tenn.	.....	.....	30.46	773.7	38	3.3	71	NE	1	0.4	.....	6ck	0	W	.....	0	0	Cloudy	.....
La Crosse, Wis.	.....	.....	30.20	767.1	39	3.9	100	S	5	2.2	.....	.....	Fog	.....	.....	0	0	Foggy	.....
Leavenworth, Kan.	.....	.....	30.07	763.8	50	10.0	78	S	10	4.5	.....	.....	10s	.....	S	Inap.	Inap.	Cloudy	.....
Louisville, Ky.	.....	.....	30.40	772.1	45	7.2	68	Calm	0	0	.....	.....	10s,sm	.....	.....	0	0	Cloudy	.....
Lynchburg, Va.	.....	.....	30.43	772.9	37	2.8	71	W	2	0.9	.....	5c	0	W	.....	0	0	Fair	.....
Malone, N. Y.	.....	.....	30.48	774.2	27	— 2.8	88	W	4	1.8	.....	.....	10s	.....	W	0.01	0.3	Cloudy	.....
Marquette, Mich.	.....	.....	30.31	769.9	28	— 2.2	67	W	2	0.9	.....	0	0	.....	.....	0	0	Clear	.....
Memphis, Tenn.	.....	.....	30.38	771.6	42	5.6	67	Calm	0	0	.....	0	5ks,sm	.....	W,SW	0	0	Fair	.....
Milwaukee, Wis.	.....	.....	30.34	770.6	36	2.2	100	SE	3	1.3	.....	.....	Fog	.....	.....	0	0	Dense fog	.....
Mobile, Ala.	.....	.....	30.43	772.9	41	5.0	91	NW	3	1.3	.....	0	Fog	.....	.....	0	0	Clear	.....
Montgomery, Ala.	.....	.....	30.44	773.2	41.5	5.3	91	Calm	0	0	.....	0	Fg',sm	.....	.....	0	0	Foggy	.....
Morgantown, W. Va.	29.35	745.5	30.48	774.2	32	0.0	68	Calm	0	0	.....	2c	Sm'c	W	.....	0	0	Fair	.....
Mt. Washington, N. H.	23.86	606.0	30.22	767.6	19	— 7.2	84	NW	24	10.7	.....	0	10s	.....	NW	0	0	Fair	.....
Nashville, Tenn.	.....	.....	30.39	771.9	39	3.9	81	Calm	0	0	.....	2c	Fog	.....	.....	0	0	Fair	.....
New Haven, Conn.	.....	.....	30.40	772.1	26	— 3.3	65	NE	5	2.2	.....	Haze	5s	.....	.....	0	0	Fair	.....
New London, Conn.	.....	.....	30.39	771.9	29	— 1.7	78	Calm	0	0	.....	0	Fog	.....	.....	0	0	Clear	.....
New Orleans, La.	.....	.....	30.38	771.6	48	8.9	92	E	4	1.8	.....	5c	Fog	W	E	0	0	Fair	.....
Newport, R. I.	.....	.....	30.40	772.1	30	— 1.1	67	Calm	0	0	.....	2k	Sm'c	NW	.....	0	0	Smoky	.....
New York, N. Y.	.....	.....	30.41	772.4	33	0.6	84	Calm	0	0	.....	Haze	Fog	.....	.....	0	0	Foggy	.....
Norfolk, Va.	.....	.....	30.38	771.6	40	4.4	82	NE	3	1.3	.....	5c	Fog	.....	.....	0	0	Fair	.....
North Platte, Neb.	27.03	686.6	29.71	754.6	25	— 3.9	88	W	8	3.6	.....	0	2s	.....	W	0	0	Clear	.....
Omaha, Neb.	28.88	733.5	29.97	761 2	47	8.3	92	S	10	4.5	.....	.....	Fog	.....	.....	0	0	Foggy	.....
Oswego, N. Y.	.....	.....	30.52	775.2	29.5	— 1.4	89	N	4	1.8	.....	.....	10s	.....	.....	0	0	Cloudy	.....
Pembina, Dakota	.....	.....	30.01	762.2	18	— 7.8	92	S	12	5.4	.....	.....	10s	.....	.....	0	0	Cloudy	.....
Philadelphia, Pa.	.....	.....	30.42	772.7	33	0.6	79	N	6	2.7	.....	0	Fog	.....	.....	0	0	Clear	.....
Pike's Peak, Col.	17.64	448.0	29.85	758.2	3	—16.1	86	W	22	9.8	.....	0	0	.....	.....	0.04	1.0	Clear	.....
Pittsburgh, Pa.	.....	.....	30.44	773.2	31	— 0.6	79	N	1	0.4	.....	.....	Fog	.....	.....	0	0	Foggy	.....
Port Huron, Mich.	.....	.....	30.44	773.2	22	— 5.6	100	Calm	0	0	.....	0	Fog	.....	.....	0	0	Foggy	.....
Portland, Me.	.....	.....	30.37	771.4	26	— 3.3	76	Calm	0	0	.....	0	Haze	.....	.....	0	0	Clear	.....
Portland, Oregon	.....	.....	29.75	755.6	45	7.2	84	Calm	0	0	.....	.....	10n	.....	.....	0.23	5.8	Light rain	.....
Punta Rassa, Fla.	.....	.....	30.30	771.1	61.0	16.1	85	NE	7	3.1	.....	0	0	.....	.....	0	0	C'ear	.....
Rochester, N. Y.	.....	.....	30.49	774.4	29	— 1.7	89	SE	6	2.7	.....	.....	10s	.....	.....	0	0	Cloudy	.....
Salt Lake City, Utah	25.80	655.3	30.13	765 3	26	— 3.3	76	NW	2	0.9	.....	2c	0	.....	.....	0.10	2.5	Clear	.....
Sandy Hook, N. J.	.....	.....	30.36	771.1	33	0.6	89	N	2	0.9	.....	0	Haze	.....	.....	0	0	Clear	.....
San Diego, Cal.	.....	.....	30.23	767.8	52	11.1	93	NE	3	1.3	.....	0	0	.....	.....	0	0	Clear	.....
San Francisco, Cal.	.....	.....	30.09	764.3	56	13.3	87	SE	12	5.4	.....	.....	10s	.....	SE	0.09	2.3	Cloudy	.....
Santa Fé, N. M.	23.35	593.1	29.89	759.2	27	— 2.8	77	N	8	3.6	.....	2c	0	.....	.....	0.03	0.8	Clear	.....
Savannah, Ga.	.....	.....	30.41	772.4	46	7.8	70	SW	4	1.8	.....	1c	Sm'c	W	.....	0	0	Smoky	.....
Shreveport, La.	.....	.....	30.40	772.1	47	8.3	85	Calm	0	0	.....	10cs	0	W	.....	0	0	Cloudy	.....
Smithville, N. C.	.....	.....	30.37	771.4	44	6.7	75	W	4	1.8	.....	8c,k	0	W	.....	0	0	Cloudy	.....
Springfield, Mass.	.....	.....	30.43	772.9	22	— 5.6	71	N	1	0.4	.....	0	Haze	.....	.....	0	0	Clear	.....
St. Louis, Mo.	.....	.....	30.31	769.9	49	9.4	64	S	14	6.3	.....	.....	10s,sm	.....	.....	0.03	0.8	Cloudy	.....
St. Marks, Fla.	.....	.....	30.42	772.7	39	3.9	91	NE	2	0.9	.....	0	2s	.....	.....	0	0	Clear	.....
St. Paul, Minn.	.....	.....	30.09	764.3	35	1.7	100	Calm	0	0	.....	.....	Fog	.....	.....	0	0	Foggy	.....
St. Paul's Island, Alaska	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Taunton's Island, Mass.	.....	.....	30.38	771.6	26	— 3.3	64	W	4	1.8	.....	0	1s	.....	W	0	0	Clear	.....
Toledo, Ohio	.....	.....	30.43	772.9	35	1.7	70	Calm	0	0	.....	Haz	Haze	.....	.....	0	0	Hazy	.....
Tucson, Arizona	27.71	703.8	30.26	768.6	37	2.8	.....	SE	.....	.....	.....	0	5 8	.....	S	0.01	0 3	Fair	.....
Tybee Island, Ga.	.....	.....	30.42	772.7	45	7.2	85	W	4	1.8	.....	2c	Sm'c	.....	.....	0	0	Fair	.....
Vicksburg, Miss.	.....	.....	30.43	772.9	48	8.9	62	SE	7	3.1	.....	6c,ck	Sm'c	W	SE	0	0	Fair	.....
Virginia City, M. T.	24.28	616.7	29.76	755.9	26	— 3.3	76	Calm	0	0	.....	10s	0	W	.....	0	0	Cloudy	.....
Washington, D. C.	.....	.....	30.43	772.9	29	— 1.7	89	W	1	0.4	.....	1	Sm'c	.....	.....	0	0	Smoky	.....
Wilmington, N. C.	.....	.....	30.36	771.1	43	6.1	75	W	4	1.8	.....	10cs	Sm'c	NW	.....	0	0	Cloudy	.....

UNITED STATES SERIES.—CONTINUED.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. U. 'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Wood's Holl, Mass.	.....	.....	30.41	772.4	29	— 1.7	89	N	3	1.3	.....	0	2s	.....	N	0	0	Fair	
Yankton, Dakota	28.70	729.0	30.02	762.5	33	0.6	84	NE	2	0.9	.....	.....	10s	.....	.....	0	0	Cloudy	
Yuma, Arizona	.....	.....	30.11	764.8	67	19.4	.....	Calm	.....	.....	.....	2c	5s	W	E	0	0	Fair	
Sub-Series.																			
Kingston, Jamaica, W. I.	.....	.....	30.25	768.3	75	23.9	90	Calm	0	0	.....	5c	5s	NE	.....	0	0	.....	James Gall.
Navassa, W. I.	.....	.....	.....	.....	75	23.9	.....	NE	.....	.....	3	.....	.....	.....	.....	3.10	78.7	.....	F. M. Everett.
Clifton, J.., W. I.	27.25	692.1	30.04	763.0	63	17.2	94	N	1.0	0.4	.....	.....	10k	.....	.....	2.35	59.7	Raining	C. Partridge.
Paramaribo, D. Guiana, S.A	.....	.....	30.01	762.2	78	25.6	86	SE	.....	.....	2	.....	10n	.....	.....	0.95(	24.1	Rainy	C. J. Hering.
Batavia, Dutch Guiana, S.A.	30.06	763.4	.....	.....	76)	24.5	.....	E	.....	.....	.....	.....	.....	.....	.....	0	0	Cloudy	Dr. H. Groot.
Medellin, Colombia, S. A.	25.24	641 1	.....	.....	64 8	18.2	81	Calm	.....	.....	0	3k	3ks	.....	.....	0.06	1.5	Cloudy	Thomas Herran.
York Factory, B. A.	.....	.....	30.10	764.5	4.0	—15.6	100	E	10	4.5	.....	4k	0	F	.....	0	0	Gloomy	J. Fortescue, W. Wood
Honolulu, Oahu, H. I.	.....	.....	30.00	762.0	70	21.1	100	S	.....	.....	3	.....	.....	.....	.....	0.62	15.7	Cloudy	Daniel Smith.
Makawao, Maui, H. I.	.....	.....	29.92	760.0	65	18.3	83	Calm	.....	.....	0	0	6n	.....	.....	1.0	25.4	.....	F. L. Clarke.

NOTE.—The originals give the amount of cloudiness by the scale 0 to 4, except York Factory, Makawao, Medellin and Paramaribo. The elevation of the barometer at Bismarck is 1,677 feet, or 511.1 meters; Cheyenne, 6,057.3 ft., or 1,846.2 m.; Clifton, about 2,892 ft., or 881.5 m.; Denver, 5,136 ft., or 1,565.2 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Florence, 1,550 (?) ft., or 472.5 (?) m.; Makawao, 2,305 ft., or 672.1 m.; Morgantown, 1,027.9 ft., or 313.3 m.; Medellin, 4,876 ft., or 1,486.2 m.; Mt. Washington, 6,285 ft., or 1,915.6 m.; North Platte, 2,846 ft., or 867.4 m.; Omaha, 1,054.6 ft., or 321.4 m.; Pike's Peak, 14,150.7 ft., or 4,313.1 m.; Salt Lake City, 4,362.2 ft., or 1,329.6 m.; Santa Fe, 6,862.2 (?) ft., or 2,091.6 (?) m.; Tucson, 2,513 (?) ft., or 772.1 (?) m.; Virginia City, 5,480 (?) ft., or 1,670.3 (?) m.; Yankton, 1,278 ft., or 389.5 m. The following constants are added in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Denver, 5.22 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fe, 6.54 in.; Tucson, 2.59 in.; Virginia City, 5.48 in. The elevation of Batavia is about 6 feet; the barometric readings need the addition of 0.2 mm. or 0.01 in. for reduction to sea-level.

UNITED STATES NAVAL SERIES.

By authority of the **SECRETARY OF THE NAVY.**

Furnished by the cooperation of the Navy Department, through Commodore Daniel Ammen, U. S. N., Chief of Bureau of Navigation.

STATIONS AND VESSELS.	True course toward—	Hourly rate in knots.	*Barometer as reported.		Temperature of the Air.		Relative Humidity.	Wind.				Clouds.				Rain-fall or melted snow in the past 24 hours.		State of Ocean.	Direction of swell from—	Weather.	Observer.
								Direction.	Velocity		Force.	Amount.		Direction.							
												Up'er	Low'r	Up'er	Low'r						
			Inches.	Millimeters.	Fahrenheit.	Centigrade.	Per cent.	From—	Miles per hour.	Meters per second.	0—10.	0—10.	0—10.	From—	From—	Inches.	Millimeters.				
Naval Academy, Annapolis, Md.			30.01	762.2	30	— 1.1	70	NNW			2		1			0	0			Hazy.	
Naval Hospital, Annapolis, Md.			30.37	771.4	29.5	— 1.4	94	Calm			0		1			0	0			Misty.	
Navy Yard, Mare Island, Cal.			30.16	766.1	57	13.9	100	SSW			4		8		NE	0.215	5.46			Rainy.	
Navy Yard, Norfolk, Va.			30.48†	774.2†	36	2.2		SSE			1		7cs							‡D. clouds.	
Navy Yard, Pensacola, Fla.			30.45	773.4	44	6.7	96	N			2		8			0	0			‡D. clouds	
Navy Yard, Portsmouth, N.H.			30.32	770.1	20	— 6.7		WNW			2				S&E					Fine.	
Adams, Port Royal, S. C.			30.44	773.2	54	12.2	93	WNW			1–2		8		E					Hazy	
Ajax, Port Royal, S. C.			30.36	771.1	50	10.0		Calm			0		5		SW					Pleasant.	
Canonicus, New Orleans, La.			30.05†	763.3†	43	6.1	100	ENE			1		5		W					Low mist.	
Catskill, Port Royal, S. C.			30.34†	770.6†	50	10.0		SSW			1		6		W			Smooth		Fair	
Colorado, New York, N. Y.			30.57	776.5	28	— 2.2		Calm			0		0			0	0			Foggy.	
Dictator, Port Royal, S. C.			30.44	773.2	49	9.4	93	Calm			0		6		E	0	0			Hazy	
Essex, Norfolk, Va.			30.42	772.7	42	5.6	100	Calm			0		4							Hazy.	
Hartford, Hampton Roads, Va.			30.48	774.2	37	2.8		NE			2		3		N	0	0			Pleasant.	
Huron, Port Royal, S. C.			30.47	773.9	50	10.0	93	Calm			0		7		E					Hazy.	
Lehigh, Port Royal, S. C.			30.48†	774.2†	48	8.9	92	S			4		5		NW					Pleasant.	
Manhattan, Port Royal, S. C.			30.38†	771.6†	50	10.0		W			2		6		ENE			Smooth		‡D. clouds.	
Michigan, Erie, Pa.			30.22	767.6	22	— 5.6	72	W			0		2		W					Clear.	
Monongahela, Baltimore, Md.			30.33	770.4	33	0.6		NW			2									Misty.	
New Hampshire, Port Royal, S. C.			30.61	777.5	53	11.7	93	W			1		6		E			Smooth		‡D. clouds	
Omaha, Panama.			30.09	764.3	75	23.9	86	NNW			1		1		NNE	0	0	Smooth		Pleasant.	
Ossipee, New Orleans, La.			30.45	773.4	41	5.0		ENE			1		5		W					Foggy.	
Pensacola, Panama.			30.12	765.0	77	25.0	77	NNW			1		1							‡D. clouds.	
Plymouth, Pensacola, Fla.			30.30	774.7	53	11.7	80	NNE			2		3		W	0	0	Smooth		Dense haze.	
¶ Rio Bravo, Matamoras, Mex.			30.00	762.0	63	17.2	94	SE			1		2		S					‡D. clouds.	
Santee, Annapolis, Md.			29.92	760.0	31	— 0.6		NNW			2		1							Hazy	
St. Louis, League Island, Pa.			30.25	768.3	29.5	— 1.4		Calm			0		10		NW	0	0			Dense fog.	
Talapoosa, Washington, D. C.			30.29	769.4	28	— 2.2	88	ENE			1		4		S&W					‡D. clouds.	
Wabash, Boston, Mass.			30.48	774.2	28	— 2.2		Calm			0		10							Misty.	
Wyoming, Washington, D. C.			30.45†	773.4	28	— 2.2		ESE			1		6							‡D. clouds.	

* It is not known that the barometer is corrected for temperature, instrumental error or elevation. † Aneroid Barometer. ‡ Detached clouds. ¶ Barometer corrected for instrumental error and reduced to sea-level.

UNITED STATES MARINE SERIES

REPORTED TO THE OFFICE OF THE CHIEF SIGNAL OFFICER OF THE ARMY.

NAMES OF VESSELS.	True course toward—	Hourly rate in knots.	Barometer reduced to sea-level.		Temperature of the air.		Relative Humidity.	Wind.				Clouds.				State of Ocean.	Direction of swell from—	Weather.	OBSERVER.
								Direction.	Velocity.		Force.	Amount.		Direction.					
												Up'er	Low'r	Upper.	Lower.				
			Inches.	Millimeters.	Fahrenheit.	Centigrade.	Per cent.	From—	Miles per hour.	Meters per second.	0—10.	0—10.	0—10.	From—	From—				
PACIFIC MAIL S. S. CO. MARINE SERIES. Furnished by the coöperation of ————, President; Williams, Blanchard & Co., Agents.																			
S. S. City of Peking																			Lt. Z. L. Tanner, U.S.N
OCCIDENTAL AND ORIENTAL S. S. CO. MARINE SERIES. Furnished by the coöperation of George H. Bradbury, President; T. H. Goodman, Agent.																			
S. S. Belgic																			Capt. John Metcalf.
S. S. Gaelic																			Capt. W. H. Kidley.
S. S. Oceanic																			Capt. H. Parsell.
NORTH GERMAN LLOYD OF BREMEN MARINE SERIES. Furnished by the coöperation of A. Schumacher & Co., Agents.																			
S. S. Baltimore																			Capt. H. Andressen.
S. S. Berlin																			Capt. C. Pohle.
S. S. Braunschweig																			Capt. K. Undütsch.
S. S. Nürnberg																			Capt. A. Jaeger.
S. S. Ohio																			Capt. G. Meyer.
MARINE SERIES. (Miscellaneous.) Furnished by the coöperation of Captain James Jorgensen.																			
Schooner Addie Fuller, at Brunswick, Ga.			30.34	770.6	52	11.1	86	W	3	1.3		0	Sm'e					Smoky	Capt. James Jorgensen

NOTE.—The schooner Addie Fuller gives the amount of cloudiness by the scale 0 to 4.

COLLATED AT THE OFFICE OF THE CHIEF SIGNAL OFFICER OF THE ARMY, WASHINGTON, D. C.

The records which appear in this Bulletin are copied from the regular exchanges of this office, made in each instance in compliance with an especial request and are published for the uses of the coöperating observers. The barometric readings in the first two columns are reduced to freezing and their respective standards; those in the second two also to mean sea-level. The "weather" is generally published as given.

When the distinction between the upper and lower strata of clouds is not reported, the *kinds* or *types*, viz: cirrus, cumulus, stratus, nimbus, scud, fracto, pallio, haze, fog and smoke, as indicated, respectively, by the letters c, k, s, n, d, f, p, hz., fg, and sm'e, are generally published with the amount in the lower-cloud column. The distinction between the upper and lower strata is carefully made in the United States Series and a portion of the Canadian Series, and the types are indicated by the above letters or their combinations in the proper column.

Albert J. Myer

Brig. Gen. (Bvt. Assgt.) Chief Signal Officer, U. S. A.

BULLETIN

OF

INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON JANUARY 31, 1877.

7:35 A. M. WASHINGTON mean time.

6:7 A. M. MEXICO mean time.
7:7 A. M. SAN JOSE mean time.
0:6 P. M. LISBON mean time.
0:28 P. M. MADRID mean time.
0:43 P. M. GREENWICH mean time.
0:53 P. M. PARIS mean time.
1:1 P. M. BRUSSELS mean time.
1:4 P. M. UTRECHT mean time.
1:18 P. M. BERNE mean time.

1:26 P. M. CHRISTIANIA mean time.
1:33 P. M. COPENHAGEN mean time.
1:33 P. M. ROME mean time.
1:37 P. M. BERLIN mean time.
1:49 P. M. VIENNA mean time.
1:55 P. M. STOCKHOLM mean time.
2:18 P. M. ATHENS mean time.
2:30 P. M. CONSTANTINOPLE mean time.
2:44 P. M. ST. PETERSBURG mean time.

10:2 P. M. TOKEI mean time.

ALGERIAN SERIES.

Furnished by the coöperation of General d'Eudeville, Commandant Supérieur du Génie in Algeria.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Nemours			30.30	769.5	51.3	10.7	34	Calm			0		6			0	0	Fair	Charnot.
Algiers			30.16	766.0	54.9	12.7		WSW			3		10			0	0	Hidden	Peter.
La Calle			29.90	759.4	55.4	13.0	68	NNW			4		8			0.591	15.0	Cloudy	Fleury.
Tunis			29.84	757.9	55.4	13.0		ESE			5		6			0	0	Fair	Jacques.
Sfax																			
Saïda			30.28	767.9	57.7	14.3	21	NNW			2		2			0	0	Clear	Millot.
Tebessa			30.01	762.3	39.2	4.0		W			4		8			0	0	Cloudy	Bourgeois.
Geriville			30.12	765.0	52.7	11.5	41	N			5		3			0	0	Fair	Lemaillot.
Laghouat			30.08	763.9	53.6	12.0	34	N			5		2			0	0	Clear	Guyot.
Biskra			30.08	763.9	63.3	17.4	40	NW			4		8			0	0	Cloudy	Kuntz.

NOTE.—In the originals the distinction between the amount of upper and lower clouds is apparently not made. The weather is published as given. The rain-fall is measured at 7 a. m., local time.

AUSTRIAN SERIES.

Furnished by the coöperation of Professor Ferdinand Osnaghi, Director of the Imperial and Royal Central Meteorological Institute at Vienna.

Agram			29.76	755.9	37.9	3.3	85	Calm			0	4				0.028	0.7		Prof. Ivan Stozir.
Cracow, I. R. Observatory			29.55	750.5	39.6	4.2	71	W			3	4				0	0		Dr. Wierzbiski.
Eperies			29.70	754.4	30.2	— 1.0	58	SE			3	10				0	0		Julius Mikolik.
Gratz	28.46	722.7	29.74	755.3	37.8	3.2	67	S			1	4				0	0		Andreas Rospini.
Hermannstadt	28.26	718.2	29.79	756.6	22.5	— 5.3	83	SSW			2	4				0	0		Prof. Reissenberger
Kremsmünster	28.42	721.8	29.80	757.0	34.5	1.4	82	W			5	10				0.051	1.3		Prof. C. Wagner.
Lemberg			29.66	753.4	25.5	— 3.6	95	E			2	9				0.004	0.1		Dr. T. Stanecki.
Nyiregyhaza																			Habsuda Daniel.
Pola			29.82	752.4	44.1	6.7	66	ENE			5	10s				0.385	9.77		I.R.Hydrographic Of'ce.
Szegedin			29.74	755.5	33.4	0.8	78	Calm			0	10				0.039	1.00		Karl Stancel.
Trieste			29.68	753.9	45.7	7.6	41	ENE			2	10				0.134	3.4	Raining	Prof. V. Farolfi.
Vienna			29.68	753.8	38.5	3.8	64	W			6	8				0	0		I. R. Central Met. Obs'y.

NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 7 p. m., local time. The elevation of Gratz is 343.5 meters, or 1,126.9 feet; Hermannstadt, 407.8 meters, or 1,337.9 feet; Kremsmünster, 383.6 meters, or 1,258.5 feet.

BELGIAN SERIES.

Furnished by the cooperation of J. C. Houzeau, Director of the Royal Observatory at Brussels.

Arlon			30.07	763.8	36.7	2.6	73	NW			3	7				0.067	1.7		Royal Observatory.
Bruxelles			30.02	762.4	43.0	6.1	63	WNW			6	4k		NW		0.026	0.67		
Furnes			30.02	762.5	43.9	6.6	70	WNW			3	5				0.043	1.1		
Maseyck			29.93	760.2	43.0	6.1	71	WNW			5	10				0.039	1.0		

NOTE.—In the originals, the weather is occasionally given in general notes.

BRITISH SERIES

Furnished by the coöperation of Robert H. Scott, Esq., Director of the Meteorological Office, London, Alexander Buchan, Secretary of the Scottish Meteorological Society, Edinburgh, and the respective Observers.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. (1—0).	Clouds. Amount. Upper. (1—10).	Clouds. Amount. Lower. (1—10).	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Aberdeen			29.88	758.9	37.5	3.0		SW	4	1.8			6			0.040	1.02	Hazy	William Boswell.
Ardrossan			29.88	758.9	43	6.1		SW			2		8					Raining	William McNeil.
Armagh, Observatory			29.85	758.2	39.	2.7		SSE	17	7.6			10					Raining	S. Call, for Dr. Robinson.
Birr Castle, (Parsonstown)			29.84	757.9	47.	8.-		SW			1–2		10					Raining	J. Dreyer.
Bradford			29.98	761.5	42.	5.6		W			2		10			0	0	Overcast	J. McLandsborough.
Bridgetown, (Barbados)			30.02	762.5	81.0	27.-		NE			2		6					*D. clouds	Sergt. J. F. Halanen. A.
Cambridge, Observatory			30.05	763.3	42.0	5.6		W			1		10					Threatening	H. Todd. (H.C.
Cardington			30.05	763.3	42.0	5.6		W			1		8					Overcast	John McLaren.
Carlisle																			T. Bell, for J. Cartmell.
Chatham, School M. E.			30.09	764.3	42.1	5.7		Calm			0							Gloomy	Maj. C. N. Martin, R.E.
Dartmoor	28.14	714.7	29.87	758.9	34.0	3.3		SW			1		10					Raining	R. L. Power,
Davos Platz, (Switzerland)	24.65	626.1			19.8	— 6.8	65	Calm			0		0					Snowing	Francis Redford, M. A.
Donaghadee			29.88	758.9	41	5.1		SSW			4		8					*D. clouds	J. Mac Gowan.
Dover			30.07	763.8	44	6.7		WNW			3		8					¼ clouded	J. Costello.
Eccles, (near Manchester)			30.01	762.2	42.1	5.6		SW	0.2	0.1			10					Gloomy	Thomas Mackereth.
Falmouth, Observatory			30.15	765.8	44.8	7.1		SSW			3		10					Rain & fog	The Staff.
Fort Napier, (Natal)	27.52	699.0	29.76	755.9	81.8	27.7		SE			3		2					Blue sky	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.85	758.2	88.0	31.1		NE			1		4					*D. clouds	
Galway, Queen's College			29.78	756.4	44	6.7		W			5		10					Misty	Prof. A. H. Curtis.
Gibraltar, (Mediterranean)			30.28	769.1	64.4	18.0		NE			1		4					*D. clouds	Corpl. C. Aitken, A.H.C.
Glasgow, Observatory			29.87	758.7	40.7	4.7		S			1		10					Gloomy	Lewis Stuart.
Great Yarmouth			29.98	761.5	42	5.6		WNW			3		5					Foggy	G. T. Watson.
Greenwich, Royal Obs'y			30.09	764.3	42.1	5.7		WSW			1		7					*D. clouds	The Staff, for G. B. Airy.
Guernsey			30.17	766.3	48	8.9		WSW			1		h					*D. clouds	Dr. S. E. Hoskins.
Helston			30.15	765.8	46	7.8		SW			2		10m			0.3	7.6	Overcast	M. P. Moyle.
Holyhead			29.90	751.4	42	5.6		SSW			4		10					Raining	John Tilston.
Kew, Observatory			30.10	764.5	42.5	6.1		W	28	12.5			10					Hazy	The Staff.
Kingstown			29.91	759.7	41	5.0		SSE			3		10					Raining	George Mitchell.
Leicester Museum			30.04	763.0	42.8	5.7		Calm			0		10			2.99	75.9	Misty	Wm. J. Harrison, F.G.S.
Malta, (Mediterranean)			29.80	756.9	56.4	13.6		SW			3		9s					*D. clouds	Corp'l. P. Bravis, A.H.C.
Nairn			29.79	756.7	38	3.5		W			1		8					¼ clouded	W. D. Penny.
Nassau, (Bahamas)			30.31	769.9	70	21.1		NE			2		4					*D. clouds	Surg. Maj. Henry.
Nottingham, Observatory			30.03	762.7	42.5	5.8		W			2		10cs		W	0.03	0.8	Overcast	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			30.03	762.7	40.6	4.4		SW			2		10					Misty	Rev. Stephen Whitty.
Oxford, Radcliffe Obs'y			30.07	763.8	42	5.6		W			1		10					Overcast	J. Lucas.
Plymouth			30.15	765.8	43.0	6.1		SW			2		10					Raining	John Merrifield.
Roche's Point			29.96	761.0	52	11.1		WSW			4		8					Cloudy	W. Kennedy.
Saint Ann's Head			30.04	763.0	45	7.2		SSW			4		10					Raining	John C. Walker.
Saint Helier, (Jersey)			30.20	767.1	50.4	10.0		NNE			2		10					Overcast	A. P. Amy.
Sandwick Manse, (Orkneys)			29.81	757.2	36	2.2		SE	10	4.5			5					*D. clouds	Rev. C. Clouston, LL. D.
Scarborough																			F. Shaw.
Scutari Cemetery, (Turkey)			29.79	756.7	43.0	6.4		ENE			2		9					*D. clouds	Sergt. W. H. Lyne.
Sheffield			29.99	761.7	43.7	6.5		SW			2		9			0.08	2.1	Overcast	W. F. Cooper.
Silloth Rectory			29.91	759.7	42.5	5.7	91	W			2		10			0.25	6.3	*D. clouds	Rev. Francis Redford
Stonyhurst, Observatory			29.98	761.5	42.0	5.8		SW			1		10					Raining	Rev. S. J. Perry.
Stornoway, Lewis C., (Hbr.)			29.71	754.6	39	3.9		SW			3		10					Threatening	John Smith.
Stratfield Turgiss			30.11	764.8	43.6	6.4		NW			1		10					Overcast	Rev. Charles H. Griffith.
Thurso			29.78	756.4	36	2.2		SSE			1		8					Overcast	John Trotter.
Truro, Royal Institution			30.07	763.8	51	10.6		W			7		10					Raining	W. Newcombe.
Valencia, Observatory			29.96	761.0	51.6	10.9		W	28	12.5			10					Drizzling	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man)					43	6.1		SW			4		10			0.8	20.3		Henry Mercer.
Cape Good Hope, Obs'y			29.94	760.5	87.5	30.8	43	WNW	9	4.0		1	4						The Staff, for E. J. Stone.
Hobart Town, (Tasmania)			29.43	747.5	72.1	22.2	94	W			5		0			Inap.	Inap.	Drizzling	Francis Abbott, F.R.A.S.
Leith, Restalrig Park			29.91	759.7	39.0	3.9		W			1		10s			0	0	Overcast	Andrew Gibb.
Mauritius, Observatory			29.74	755.4	83.7	28.7	71	NW	11.0	4.9		1	7		NNW	0.29	7.4	*D. clouds	C. Meldrum.
Melbourne, Observatory			29.95	760.7	62.3	16.8	78	SE	4	1.8			3			0	0	Fine	R. L. J. Ellery.
Monach Light-house, (Hebrides)			29.63	752.6	43	6.1		S			7		10			0.1	2.5		J. Youngclause.
North Unst, (Shetland Is.)			29.81	757.2	41	5.0		SW			1	0	2						Robert Burnet.

NOTE.—Generally, the originals do not give the relative humidity, rain-fall, or distinction between upper and lower clouds. The originals give the wind direction to 32 points and weather by the Beaufort notation. The originals give the barometer for Aberdeen, Cardington, Galway, Oxford, St. Helier, Sandwick, Scarborough, Stonyhurst, Leith, Monach and North Unst as read off and the amount of cloudiness for Stornoway by the scale 0 to 4. The wind-force is given by the scale 0 to 12 in the official series; 0 to 6 in the sub-series; except in lbs. per square foot for Greenwich and Hobart Town. The rain-fall is measured at Aberdeen at 9 a. m.; Bradford, 9 a. m.; Hobart Town, 7:30 a. m.; Nottingham, 6 p. m.; Mauritius, 9 a. m., local time. The elevation of Dartmoor is 1,400 feet, or 426.7 meters; Davos Platz, 5,855 feet, or 1,784.3 meters; Fort Napier, 2,220 feet, or 676.6 meters.
*Detached clouds. †Total for month

COSTA RICA SERIES.

By authority of the Minister of Foreign Affairs.

Furnished by the coöperation of Senor Federico Maison, Director of the Central Office of Statistics and Meteorology.

San José																			

DANISH SERIES.

Furnished by the coöperation of Captain N. Hoffmeyer, Director of the Royal Danish Meteorological Institute at Copenhagen.

Copenhagen			29.39	746.5	34.0	1.1	94	NNW			8		10					Raining	
Fanöe			29.63	752.6	36.0	2.2	77	N			6		5						
Godthaab, (Greenland)			29.38	746.3	7.7	—13.5	89	Calm			0		5						
Tiykkisholm, (Iceland)			29.30	744.2	30.7	— 0.7	94	SE			2		8						
Shorshavn, (Faröe)			29.62	752.4	39.2	4.0	85	SSW			4		10					Raining	
Vestervig			29.60	751.9	33.8	1.0	89	N			4		9						

NOTE.—The originals give the wind-force by the scale 0 to 6; occasionally, weather by Vienna symbols; no distinction between the amount of upper and lower clouds.

FRENCH SERIES.

Furnished by the co operation of His Excellency, U. J. Le Verrier, Director of the Paris Observatory, and the respective Observers.

STATIONS.	Barometer: Corrected for instrum'tal error and temperature. Inches.	Barometer: Corrected for instrum'tal error and temperature. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather	Observer.
Alençon	.....	.....	30.22	767.6	46.4	8	64	NW	.....	.....	3	.....	5kn	.....	NW	0.378	9.6	Cloudy	Normal School.
Amiens	.....	.....	30.11	764.9	45.0	7.2	83	SW	.....	.....	3	.....	5	.....	W	0.244	6.2	Cloudy	Normal School.
Avignon	.....	.....	30.07	763.8	46.4	8	40	N	.....	.....	3	.....	.....	.....	N	0	0	.....	Normal School.
Bar-sur-Seine	.....	.....	30.14	765.6	42.6	5.9	66	N	.....	.....	2	.....	5	.....	N	0.429	10.9	Cloudy	C. Saillard.
Beaumette, (near Angers)	.....	.....	30.21	767.4	46.8	8.2	72	W	4.5	2.0	.....	.....	.....	.....	W	0	0	.....	Beaumette Observ'tory.
Beauvais	.....	.....	30.15	765.8	43.9	6.6	60	NW	.....	.....	2	.....	5	.....	NW	0.24	6.	Cloudy	Normal School.
Besançon	.....	.....	30.18	766.5	38.8	3.8	70	SW	.....	.....	3	.....	8	.....	N	0.717	18.2	Very cloudy	Normal School.
Bourg en Bresse	.....	.....	30.24	768.0	40.8	4.9	63	N	.....	.....	2	.....	2kn	.....	S	0.24	6.	Slightly cl'dy	Normal School.
Bourges	.....	.....	30.23	767.9	43.9	6.6	66	WSW	.....	.....	2	.....	.....	.....	SW	0.28	7.	Cloudy	Normal School.
Brest	.....	.....	30.15	765.9	46.6	8.1	83	SW	.....	.....	3	.....	10	.....	WSW	0.128	3.25	Rain & fog	Naval Observatory.
Carcassonne	.....	.....	30.17	766.4	51.1	10.6	70	NW	.....	.....	5	.....	5	.....	SE	0.138	3.5	Cloudy	Normal School.
Caen	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Chartres	.....	.....	30.18	766.6	46.4	8	59	NW	.....	.....	2	.....	0	.....	.....	0.022	0.5	Clear	Normal School.
Châlons-sur-Marne	.....	.....	30.12	765.0	44.6	7.0	87	NW	.....	.....	3	.....	2k	.....	SE	0.449	11.4	Slightly cl'dy	Normal School.
Clermont	.....	.....	30.19	766.8	43.5	6.4	60	NW	.....	.....	2	.....	8	.....	NW	0.417	10.6	Very cloudy	Puy de Dome Obs'y.
Commercy	.....	.....	30.09	764.3	39.2	4	93	NW	.....	.....	4	.....	5kn	.....	W	0.59	15.	Cloudy	Normal School.
Commune de Gréasque*	.....	.....	29.93	760.1	42.4	5.8	32	NW	.....	.....	8	.....	2	.....	NW	0.04	1.	.....	M. Kina.
Grenoble	.....	.....	30.13	765.4	39.4	4.1	89	NNW	.....	.....	2	.....	5ks	.....	E	0.575	14.60	Cloudy	Normal School.
La Roche-sur-Yon	.....	.....	30.29	769.4	49.6	9.8	72	W	.....	.....	2	.....	5	.....	SW	0.236	6.0	Cloudy	Normal School.
Le Mans	.....	.....	30.23	767.7	45.7	7.6	66	NNW	.....	.....	2	.....	5	.....	NW	0.08	2.	C oudy	Normal School.
Lons-Le-Saulnier	.....	.....	30.16	766.1	39.4	4.1	65	N	.....	.....	1	.....	5	.....	S	0.646	16.40	Cloudy	Normal School.
Lorient	.....	.....	30.27	768.8	49.3	9.6	66	WSW	.....	.....	2	.....	10	.....	.....	0.020	0.5	Covered	Naval Observatory.
Mâcon	.....	.....	30.11	764.9	41.7	5.4	88	NW	.....	.....	2	.....	10	.....	.....	0.220	5.6	Covered	Normal School.
Metz	.....	.....	30.12	765.0	38.3	3.5	85	WNW	.....	.....	3	.....	.....	.....	.....	0.441	11.2	.....	M. Schuster.
Mirecourt	.....	.....	30.13	765.3	38.1	3.4	80	ENE	.....	.....	4	.....	8	.....	WSW	0	0	Very cloudy	Normal School.
Nismes	.....	.....	30.11	764.7	49.3	9.6	56	N	.....	.....	2	.....	0	.....	.....	0	0	Clear	Normal School.
Orleans	.....	.....	30.13	765.3	45.0	7.2	71	NW	.....	.....	2	.....	2	.....	NNW	0.102	2.6	Slightly cl'dy	Normal School.
Paris, Observatory	.....	.....	30.15	765.9	45.1	7.3	55	NW	.....	.....	3	.....	6k	.....	WNW	0.251	6.37	Cloudy	National Observatory.
Parthenay	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Privas	.....	.....	30.12	765.0	42 6	5.9	.....	NE	.....	.....	2	.....	5	.....	NE	0	0	Cloudy	Normal School.
Rochefort, Observatory	.....	.....	30.32	770.1	51.8	11.0	83	NW	.....	.....	3	.....	5	.....	SE	0.20	5.	½ covered	Naval Observatory.
Rouen	.....	.....	30.15	765.7	47.1	8.4	63	NW	.....	.....	4	.....	5	.....	NW	0.161	4.1	Cloudy	Normal School.
Saint Lo	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Tarbes	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Villefranche	29.15	740.4	30.20	768.6	46.4	8	72	W	.....	.....	2	.....	10	.....	.....	0.39	10.	Covered	Normal School.
	.....	.....	30.13	765.3	42.4	5.8	77	N	.....	.....	3	.....	5	.....	N	0.260	6.6	Cloudy	Normal School.
SUB-SERIES.																			
Fort de France, Martinique	.....	.....	29.89	759.2	75.2	24	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	L'Abbé Marchésl.
Marseilles	.....	.....	29.90	759.4	47.7	8.7	26	NW	.....	.....	6	.....	1	.....	.....	0.031	0.80	Partly cl'dy	Marseilles Observatory.
Mont-Louis	24.80	632.2	30.21	767.2	30.4	— 0.9	52	W	11.2	5.00	.....	.....	8	.....	W	0.224	5.7	.....	—. Falguère.
Montsouris, Paris	.....	.....	30.14	765.5	44.4	6.9	64	NW	.....	.....	3	.....	7	.....	NNW	0.213	5.4	.....	Montsouris Observatory
Perpignan	.....	.....	30.18	766.6	47.8	8.8	58	NW	26.1	11.67	.....	.....	8	.....	NW	0.055	1.4	.....	Dr. Flues.
Pic du Midi, (Summit,) H. P.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. Bay.ac.
Pic du Midi, (Plantade,) H. P.	22.50	571.6	.....	.....	15.8	— 9.0	.....	NW	.....	.....	3	.....	8	.....	.....	1.602	40.7	Snowy	General de Nansouty.
Saint Maur, (near Paris)	.....	.....	30.14	765.6	45.1	7.3	66	NW	.....	.....	1	...	...	8	.....	.....	0.252	6.4	Cloudy	E. Renou.
Toulouse	.....	.....	30.31	769.9	45.7	7.6	64	WNW	.....	.....	3	.....	9	.....	.....	0.335	8.5	.....	Toulouse Observatory.
Tours	.....	.....	30.26	768.6	45.5	7.5	66	NW	.....	.....	2	.....	5	.....	NNW	0.398	10.1	.....	C. Marquet.
Versailles, (near Paris)	.....	.....	30.14	765.5	45.7	7.6	59	N	.....	.....	3	.....	7	.....	.....	0.168	4.27	Fair	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai)	.....	.....	30.31	769.8	39.4	4.1	92	NE	8.9	4.00	.....	.....	10	.....	.....	0.646	16.4	Rainy	Marc Dechevrens, S. J.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—Generally, the originals give the wind-force by the scale 0 to 7; no distinction between upper and lower clouds, and, in the official series, the amount by the scale 0 to 4; the rain-fall as measured at 7, 8 or 9 a. m., local time; at Clermont, 9 a. m. of the following day; the weather in general terms as published. The elevation of Clermont is 388 meters, or 1,272.9 feet; Commune de Gréasque, 322 meters, or 1,056.4 feet; Tarbes, 308 meters, or 1,010 feet; Mont-Louis, 1,586.40 meters, or 5,204.8 feet; Pic du Midi, (Summit,) 2,877 meters, or 9,439.1 feet; Pic du Midi, (Plantade,) 2,366 meters, or 7,762.6 feet. In correcting the Mont-Louis barometric observations for altitude, the constant 135. millimeters has been added. *Bouches-du-Rhône

GERMAN SERIES.

Furnished by the coöperation of Professor Dr. G. Neumayer, Director of the German Naval Observatory, Hamburg.

Bamberg	.....	.....	29.65	753.1	38.3	3.5	59	WNW	.....	.....	9	.....	9	WNW	.....	0.551	14.0	Rain & snow	Prof. T. Hoh.
Berlin	.....	.....	29.38	746.3	37.4	3.0	83	NW	.....	.....	5	.....	10	.....	.....	0.413	10.5	Rain & snow	Prof. Arndt.
Breslau	.....	.....	29.39	746.6	36.7	2.5	80	SW	.....	.....	5	.....	10	.....	.....	0.047	1.2	Light rain	Royal University Obs'y.
Carlsruhe	.....	.....	29.98	761.6	39.2	4.0	77	SW	.....	.....	3	.....	10	.....	.....	0.316	8.0	.....	A. Sens.
Cassel	.....	.....	29.75	755.6	38.7	3.7	92	NW	.....	.....	8	.....	10	WNW	.....	0.028	0.7	Rain & snow	Dr. H. Möhl.
Crefeld	.....	.....	29.89	759.3	41.9	5 5	82	N	.....	.....	5	.....	5	.....	.....	0.31	8.	.....	Director Lose.
Emden	.....	.....	30.02	762.4	37.4	3.0	96	N	.....	.....	3	.....	1	.....	.....	0.327	8.3	.....	Prof. Prestel.
Frankfort on the Main	.....	.....	29.91	759.7	41.6	5.0	61	NW	.....	.....	5	.....	2	.....	.....	0.232	5.9	.....	Physical Society.
Friedrichshafen	28.58	725.9	30.07	763.8	36.0	2.2	72	W	.....	.....	4	.....	10	.....	.....	0	0	.....	M. Wilhelm.
Hamburg	.....	.....	29.60	751.7	38.6	3 6	73	NW	.....	.....	7	.....	7k	NW	.....	0.335	8.5	Squally	Captain F. Hegemann.
Kiel	.....	.....	29.56	750.9	36.5	2.5	87	NW	.....	.....	2	.....	7	.....	.....	0.260	6.6	.....	Prof. G. Karsten.
Königsberg, (Prussia)	.....	.....	29.40	746.7	36.1	2.3	82	SE	.....	.....	2	.....	5	.....	.....	0.043	1.1	.....	Prof. E. Luther.
Köslin	.....	.....	29.23	742.5	36.3	2.4	.....	Calm	.....	.....	0	.....	10	.....	.....	0.425	10.8	.....	H. Müller.
Leipsic	.....	.....	29.59	751.6	33.6	0.9	100	WNW	.....	.....	5	.....	10	.....	.....	0.079	2.0	Snowing	Prof. Bruhns.
Memel	.....	.....	29.43	747.4	33.6	0.9	88	SSE	.....	.....	3	.....	10ks	.....	.....	0.303	7.7	.....	Reinbrecht & Skalweit.
Münster	.....	.....	29.72	754.9	41.5	5.3	78	SW	.....	.....	4	.....	10	.....	.....	0.661	16.8	.....	Prof. E. Heis.
Neufahrwasser	.....	.....	29.29	743.9	35.4	1.9	88	SE	.....	.....	2	.....	10	.....	.....	0.043	1.1	Raining	A Lothe.
Posen	.....	.....	29.20	741.7	36.3	2.4	85	SW	.....	.....	6	.....	10	.....	.....	0.083	2.1	Rain & snow	Dr. Magener.
Strassburg, (in Alsace)	.....	.....	30.06	763.5	40.1	4.5	68	WNW	.....	.....	3	.....	10	NW	.....	0.051	1.3	.....	Dr. Schur.
Stuttgart	.....	.....	29.95	760.7	38.7	3.7	58	W	.....	.....	4	.....	10	.....	.....	0	0	.....	Prof. Schoder.
Thorn	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Dr. Hasenbalg.
Treves, (Trier)	.....	.....	29.96	760.9	40.1	4.5	72	W	.....	.....	7	.....	9	.....	.....	0.051	1.3	Light fog	Prof. Flesch.
Weissenburg, (Bavaria)	28.31	719.0	29.87	758.6	34.9	1.6	73	W	.....	.....	6	.....	10	W	.....	0.114	2.9	.....	Dr. von Bebber.
Wustrow, Naval School	.....	.....	29.41	747.1	33.6	0.9	95	N	.....	.....	5	.....	10	.....	.....	Inap.	Inap.	Snowing	E. F. Schütz.
GERMAN NAVAL SERIES.																			
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—The elevation of Friedrichshafen is 413.4 meters, or 1,356.3 feet; Weissenburg, 431 meters, or 1,414.0 ft. In the originals the distinction between the amount of upper and lower clouds is not made. It is not always certain that the remarks in the weather column refer to the moment of observation.

GREEK SERIES.

Furnished by the cooperation of Professor Dr. J. F. Julius Schmidt, Director of the Royal Observatory at Athens.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Athens			29.81	757.1	50 7	10 4		NW										Clear	

Note.—The originals give the barometer corrected, but not reduced to sea-level; occasionally the kind of clouds; the weather as published. They omit the humidity, wind-force, amount of cloudiness and rain-fall.

ITALIAN SERIES.

Furnished by the cooperation of His Excellency the Minister of Agriculture, Industry and Commerce, and the respective Observers.

Udine			29.69	754.0	41.9	5.5	56	Calm	0	0			10			0	0		Prof. Giovanni Clodgi.
Stelvio	21 79	553.4			8.6	—13.0		SE			6		10			0	0		Signora Ernesta Manfredi.
Valdobbia	21.78	553.2			9.9	—12.3	76	WSW			6		2	N		0	0		Ab. Dom. Mongini.
Padua			29.69	754.1	41.9	5.5	64	NW	1.8	0.8			10	N		0	0		Prof. Dott. Lorenzoni.
Vicenza			29.71	754.6	42.6	5.9	55	W	0.7	0.3			6	W		0	0		Conte Alm. Da Schio.
Verona			29.69	754.0	40.6	4.8	84	E			1		0			0	0		Dott. B. Bertoncelli.
Bergamo	28.54	725.0	29.91	759.8	45.7	7.6	1	NW			6		0			0	0		Prof Trionfini Carlo.
Domodossola			29.87	758.7	46.0	7.8	23	N			6		4			0	0		Prof. Giuseppe Calza.
Milan			29.84	757.8	48.4	9.1	25	N			6		1	N		0	0		Ab. Gio. Capelli
Pavia			29.73	757.2	47.1	8.4	18	N			6		0			0	0		Prof. Gio. Cantoni.
Moncalieri			29.81	757.2	47.1	8.4	74	NNE	8.1	3.6			1			0	0		Prof. P. F. Denza.
Mondovi	27.83	706.6	29.81	757.2	42.4	5.8	18	NNW			6		0			0	0		Prof. D. C. Bruno.
Porto Maurizio			29.73	755.2	52.5	11.4	5	N			4		0			0	0		Prof. L. Vassallo.
Genoa			29.71	754.5	51.1	10.6	10	N	15.0	6.7			0			0	0		Prof. G. M. Garibaldi.
Piacenza			29.70	754.3	49.5	9.7	19	NW	23.0	10.3			0			0	0		Dott. G. Manzi.
Parma			29.73	755.1	42.3	5.7	68	SE			4		2			0	0		Prof. P. Pigorini.
Florence			29.61	752.1	44.6	7.0	52	NE			6		10	NE		0.315	8.0	Raining	Cav. F. Meucci.
Leghorn			29.57	751.0	50.7	10.4	18	NE	13.0	5.8			3	NE		0	0		Prof. P. Monte.
Siena	28.34	719.7	29.59	751.5	41.5	5.3	47	N	13.0	5.8			9	N		0.098	2.5	Raining	Prof. L. Toscani.
Urbino	28.09	711.2	29.63	752.7	32.5	0.3	100	NNE			4		10			0.197	5.0	Raining	Prof. P. Serpieri.
Pesaro			29.54	750.4	42.3	5.7	89	NE	52.1	23.3			10	NE		0.157	4.0	Rain & snow	Prof. Luigi Guidi.
Ancona			29.52	749.7	40.6	4.8	90	NW			6		10			0.512	13.0	Raining	Prof. F. De— Bovis.
Grosseto			29.54	750.3	49.6	9.8	46	NNE			6		6	NE		0 252	6.4	Raining	Avv. P. Ponticelli.
Rome			29.43	747.4	41.5	5.3	89	N	25.7	11.4			10			0.4 6	10.8	Raining	Prof's. P. Secchi & L. Respighi.
Naples, O. U.			29.38	746.2	55.4	13.0	70	SSW			6		9	WSW		0.796	20.2	Raining	Prof. L. Palmieri.
Lecce			29.67	753.5	51.1	10.6	63	SSE	30.4	13.6			9			0	0		Prof. C. De—Giorgi.
Cosenza			29.63	752.5	46.8	8.2	83	WSW	6.3	2.8			10			0.933	23.7	Thunder-storm	Prof. F. D. Conti.
Cagliari																			Prof. A. Pacinotti.
Riposto, (Sicily)			29.60	751.7	50.9	10.5	66	NW			2		9			0	0		Prof. F. Cafiero.
Palermo			29.55	750.5	53.4	11.9	64	W	7.4	3.3			10			0.047	1.2	Raining	Prof. G. Cacciatore.
Caltanissetta	27.61	701.3	29.62	752.3	44.1	6.7	85	W			6		10	SE		0.130	3.3	Raining	Prof. A. Pagani.
Siracusa			29.61	752.1	53.4	11.9	77	WSW			2		10	WSW		0	0		Prof. V. Giuliano.
Sub-Series.																			
Naples, S. R.			29.41	746.9	52.3	11.3	75	WNW	13.0	5.8			8	NW		0.638	16.2		Prof. F. Brioschi

Note.—The originals give the wind-force by the scale 0 to 4, or the velocity in kilometers per hour; generally, no distinction between upper and lower clouds; occasionally the weather by the Vienna symbols. The elevation of Stelvio is 2,543.0 meters, or 8,342.9 feet; Valdobbia, 2,548.0 meters or 8,359.3 feet; Bergamo, 379.6 meters, or 1,24 8 feet; Mondovi, 556 meters, or 1,824.2 feet; Siena, 348.5 meters, or 1,143.3 feet; Urbino, 451 meters, or 1,479.7 feet; Caltanissetta, 570.3 meters, or 1,871.0 feet.

JAPANESE SERIES.

Furnished by the coöperation of the Imperial University of Tokei, Japan.

Tokei			30.05	763.3	31	—0.6		NW	1	0.4			0			0	0		Prof. P. V. Veeder.

Note.—The originals give the amount of cloudiness by the scale 0 to 4 without distinguishing between upper and lower clouds. The rain-fall is measured at 7 a. m., cal time.

MEXICAN SERIES.

By authority of the Secretary of Public Works.

Furnished by the coöperation of Senor Mariano Barcena, Director of the Central Meteorological Observatory in the City of Mexico.

Mexico																			Mariano Barcena.
																			Vicente Reyes.
																			Miguel Perez.
																			(Engineers in charge.)

Note.—The elevation of Mexico is 2,290 meters, or 7,512.9 feet. The rain-fall is measured at 6 a. m., local time.

NETHERLANDS' SERIES.

Furnished by the cooperation of Professor Buys Ballot, Director of the Royal Meteorological Institute of the Netherlands at Utrecht.

Flushing			30.04	763.1	42.4	5.8		NW			4					0.150	3.8		
Groningen			29.76	755.9	41.7	5.4										0.402	10.2		
Heider			29.89	759.2	41.0	5.0		NW			6					0.063	1.6		
Utrecht			29.89	759.3	40.8	4.9	79	NW			5		8			0.055	1.4	Very cloudy	

Note.—The originals give the wind-pressure in kilograms per square meter; for Utrecht, they give the weather as published, from which the amount of cloudiness is taken by the scale 0 to 4, without distinguishing between upper and lower clouds. It is assumed that the barometer-readings have been reduced to sea-level.

NORWEGIAN SERIES.

Furnished by the coöperation of Professor H. Mohn, Director of the Royal Norwegian Meteorological Institute at Christiania.

Bergen			29.67	753.6	34.5	1.4	56	N	6.0	2.7			0			0	0		
Brönö			29.60	751.7	32.0	0.0	81	NW	17.9	8			10			0.10	2.6		
Christiania			29.62	752.3	32.0	0.0	67	SW	2.7	1.2			1			0	0		
Tromsö			29.49	749.1	22.3	—5.4	76	E	26.8	12			10			0	0		

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols. The cloudiness and weather at Bergen refer to 2h., p. m., local time, instead of 1h., 4 min.

PORTUGUESE SERIES.

Furnished by the coöperation of J. C. de Brito Capello, Director of the Meteorological Observatory of the Infante Don Luiz at Lisbon.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Angra, (Azores)	.....	.....	30.32	770.2	59.0	15.0	93	S	4.3	1.9	.....	.....	10	.....	.....	0.008	0.2	Raining	Dr. J. A. Sampaio.
Campo Maior	.....	.....	30.36	771.1	59.5	15.3	47	NNW	9.1	4.06	.....	.....	7	NNW	.....	0	0	.....	Dr. A. M. R. dos Santos.
Funchal, (Madeira)	.....	.....	30.44	773.1	64.8	18.2	58	ESE	6.2	2.78	.....	.....	0	.....	.....	0	0	.....	Capt. D. A. de Cunha.
Lisbon	.....	.....	30.45	773.4	56.5	13.6	71	N	23.7	10.6	.....	.....	4	.....	.....	0	0	.....	The Observatory.
Ponta Delgada, (Azores)	.....	.....	30.38	771.7	62.6	17.0	83	S	8.7	3.9	.....	.....	3	.....	.....	0.024	0.6	.....	
.....																			

Note.—The originals give the wind-velocity in kilometers per hour; occasionally, the weather by the Vienna symbols; the amount of cloudiness without distinguishing between upper and lower clouds; the barometer corrected but not reduced to sea-level. The rain-fall at Lisbon is measured at noon, instead of 0 h. 6 m., p. m.

RUSSIAN SERIES.

Furnished by the coöperation of Professor H. Wild, Director of the Imperial Central Physical Observatory of Russia, at St. Petersburg.

Warsaw	.....	.....	29.44	747.8	36.0	2.7	69	SSE	18	8	.....	.....	2	.....	.....	.....	.....	.....	Astronomical Obs.
Wilna	.....	.....	29.60	751.9	24.4	— 4.2	80	SE	13	6	.....	.....	10	.....	.....	.....	.....	.....	Astronomical Obs.
Dorpat	.....	.....	29.59	751.5	25.3	— 3.7	94	SE	4	2	.....	.....	10	.....	.....	.....	.....	Snowing	Physical Cabinet.
St. Petersburg	.....	.....	29.67	753.6	20.1	— 6.6	91	SSE	18	8	.....	.....	10	.....	.....	.....	.....	Light snow.	Central Physical Obs.
Kuopio	.....	.....	29.52	749.7	24.4	— 4.2	.....	S	18	8	.....	.....	10	.....	.....	.....	.....	.....	Ch. Forsten.
Kieff	.....	.....	29.92	760.0	11.5	—11.4	100	SE	7	3	.....	.....	10	.....	.....	.....	.....	Snowing	Physical Cabinet.
Nikolaiev	.....	.....	30.00	762.0	17.1	— 8.3	94	ESE	13	6	.....	.....	10	.....	.....	.....	.....	.....	Kurdakof.
Kertch	.....	.....	29.96	761.0	28.6	— 1.9	80	N	7	3	.....	.....	6	.....	.....	.....	.....	.....	Lagorio.
Moscow	.....	.....	30.16	766.0	13.5	—10.3	73	SSW	11	5	.....	.....	5	.....	.....	.....	.....	.....	Meteorological Obs.
Lugan	.....	.....	29.99	761.7	16.7	— 8.5	79	NE	7	3	.....	.....	10	.....	.....	.....	.....	.....	Meteorological Obs.
Archangel	.....	.....	29.71	754.7	17.2	— 8.2	88	S	18	8	.....	.....	10	.....	.....	.....	.....	.....	Ogorodnikof.
Tiflis	28.49	723.6	29.93	760.3	44.8	7.1	66	SE	9	4	.....	.....	3	.....	.....	.....	.....	.....	Physical Observatory.
Astrakhan	.....	.....	30.14	765.6	21.7	— 5.7	75	E	16	7	.....	.....	10	.....	.....	.....	.....	.....	Sebastianof.
Kasan	.....	.....	30.45	773.4	— 2.7	—19.3	61	SSW	4	2	.....	.....	0	.....	.....	.....	.....	.....	Physical Cabinet.
Orenburg	.....	.....	30.07	763.8	— 0.9	—18.3	72	SE	18	8	.....	.....	5	.....	.....	.....	.....	.....	Tschernischei.
Ekaterinburg	29.39	746.4	30.45	773.3	2.1	—16.6	68	SW	4	2	.....	.....	0	.....	.....	.....	.....	.....	Meteorogical Obs.
Nukuss	.....	.....	30.41	772.3	13.6	—10.2	44	ENE	9	4	.....	.....	0	.....	.....	.....	.....	.....	
Kasaly	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Bobrof.
Tashkend	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Michelson.
Barnaul	.....	.....	30.73	780.5	— 9.6	—22.8	82	Calm	0	0	.....	.....	0	.....	.....	.....	.....	.....	Meteorological Obs.
Yeniseisk	.....	.....	30.61	777.4	—22.4	—30.2	72	Calm	0	0	.....	.....	0	.....	.....	.....	.....	.....	Marks.
Irkutsk	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Usolzef.
Peking, (China)	.....	.....	30.50	774.6	29.3	— 1.5	80	Calm	0	0	.....	.....	7	.....	.....	.....	.....	.....	Physical Observatory.
Nertchinsk	28.19	716.1	30.07	779.0	—29.4	—34.1	87	Calm	0	0	.....	.....	0	.....	.....	.....	.....	.....	Meteorological Obs.
Vladivostock	.....	.....	30.19	766.8	16.7	— 8.5	82	Calm	0	0	.....	.....	1	.....	.....	.....	.....	.....	
Nikolaievsk, on the Amoor	.....	.....	.....	.....	17.2	— 8.2	.....	NW	2	1	.....	.....	10	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols; they omit the rain-fall. The elevation of Tiflis is 409 meters, or 1,341.8 feet; Ekaterinburg, 306.4? m., or 1,005.2? ft.; Tashkend, 494.2? m., or 1,621.3? ft.; Irkutsk, 392 m., or 1,286 ft.; Nertchinsk, 592.0? m., or 1,942.2? ft.

SPANISH SERIES.

Furnished by the coöperation of Antonio Aguilar, Director of the Royal Observatory at Madrid, and of Don Cecilio Pujazon, Captain R. N. Director of the Naval Observatory at San Fernando.

Madrid	.....	.....	30.30	769.6	55.8	13.2	58	E	2.2	1.00	.....	1	2	NE	.....	0	0	Light clouds	Royal Observatory.
San Fernando	.....	.....	30.40	772.2	54.9	12.7	76	WNW	5.8	2.6	.....	4	5	W	W	.....	.....	.....	Naval Observatory.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

Note.—The originals give the weather in general terms, as published; rain-fall for San Fernando from preceding to following midnight; wind-velocity for Madrid in kilometers per hour.

SWEDISH SERIES.

Furnished by the coöperation of Professor R. Rubenson, Director of the Royal Swedish Meteorological Institute, at Stockholm, and of Dr. H. H. Hildebrandsson, Chief of the Meteorological Division of the Upsala Observatory.

Haparanda	.....	.....	29.26	743.3	30.9	— 0.6	100	NW	.....	.....	2	.....	10	.....	.....	0	0	.....	
Umea	.....	.....	29.48	747.5	25.5	— 3.6	100	Calm	.....	.....	0	.....	7	.....	.....	0	0	.....	
Hernosand	.....	.....	29.45	748.1	32.4	0.2	97	WNW	.....	.....	2	.....	5	.....	.....	0	0	.....	
Stockholm	.....	.....	29.42	747.2	32.0	0.0	90	NNE	.....	.....	4	.....	10	.....	.....	0.010	0.4	Snowing	
Wisby	.....	.....	29.35	745.6	35.2	1.8	93	S	.....	.....	2	.....	10	.....	.....	0.067	1.7	.....	
Sub-Series.																			
Upsala	.....	.....	29.46	748.3	31.8	— 0.1	89	NNW	8.3	3.7	.....	.....	9	.....	NNE	0.001	0.03	.....	Dr. Hildebrandsson.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

Note.—The originals give the wind-force by the scale 0 to 6, and Upsala also velocity in meters per second; occasionally, the weather by the Vienna symbols, or in general terms; no distinction between the amount of upper and lower clouds. The rain-fall is measured at 8 a. m., local time.

SWISS SERIES.

Furnished by the coöperation of Professor R. Wolf, Director of the Observatory at Zurich, and of Professor E. Plantamour, Director of the Observatory at Geneva.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall, or melted snow in the past 24 hours. Inches.	Rain-fall, or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Geneva	28.67	728.2	30.15	765.7	38.1	3.4	45	NNW	.....	.....	5	.....	6	.....	.....	0.307	7.8	Cloudy	The Observatory.
Zurich	28.41	721.5	30.11	764.8	34.5	1.4	73	W	.....	.....	1	.....	8	.....	.....	0.402	10.2	Covered	The Observatory.

NOTE.—For Geneva the corresponding departures from the normal values are: Barometer, +1.1 mm; Thermometer, +1.2 cent.; Relative Humidity, —31 per cent.

NOTE.—The rain-fall is measured at Zurich at 7 a. m. on the following day. The originals give the barometer corrected but not reduced to sea-level; the wind-force by the scale 0 to 4 for Zurich; the amount of cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The elevation of Geneva is 408 meters, or 1,339 feet, and that of Zurich 470 meters, or 1,542 feet.

TURKISH SERIES.

Furnished by the coöperation of A. Coumbary, Effendi, Director of the Central Observatory at Constantinople, and of Professor C. V. A. Van Dyck, Superintendent of the Lee Observatory at Beirut.

Constantinople	.....	.....	29.80	757.0	40.5	4.7	68	ENE	13	6.0	.....	.....	6	.....	SW	00	00	.....	
Fao, (Persian Gulf)	.....	.....	29.93	760.3	59.4	15.2	.....	SW	.....	.....	4	.....	10	.....	.....	.....	.....	Raining	
Salonica	.....	.....	29.79	756.7	50.5	10.2	.....	SE	.....	.....	1	.....	0	.....	.....	.....	.....	.....	
Valona	.....	.....	29.58	751.2	51.8	11.0	.....	SW	.....	.....	2	.....	5	.....	.....	.....	.....	.....	
Varna	.....	.....	29.80	757.0	41.0	5.0	.....	N	.....	.....	1	.....	0	.....	.....	.....	.....	.....	
SUB-SERIES.																			
Beirut, (Syria,) Lee Obs'y	.....	.....	29.73	755.1	65.5	18.6	66	SW	.....	.....	2	.....	8k8	.....	SW	0.15	3.8	*D. clouds	Prof. C. V. A. Van Dyck.

NOTE.—The originals give the wind-force by the scale 0 to 7, (except Beirut, by the scale 0 to 12, and Constantinople velocity in meters per second;) the weather in general terms as published; no distinction between upper and lower clouds, and, except Constantinople and Beirut, the amount by the scale 0 to 4. It is assumed that the barometer is reduced to sea-level. * Detached clouds.

CANADIAN SERIES.

Furnished by the coöperation of Professor G. T. Kingston, Director of the Magnetic Observatory at Toronto, and Superintendent of the Meteorologica Office of the Dominion of Canada, and the respective Observers. Those marked with a star (*) are also telegraphed daily to the office of the Chief Signal Officer, U. S. Army.

Bathurst, N. B	.....	.....	30.12	765.0	27.7	— 2.4	85	Calm	0	0	.....	.....	0	.....	.....	.....	.....	.....	Hon. J. Ferguson.
Brockville, Ontario	.....	.....	30.36	771.1	26	— 3.3	.....	SW	3	1.3	.....	.....	10s	.....	SW	0	0	Cloudy	W. R. Bigg.
*Chatham, N. B	.....	.....	30.16	766.1	27	— 2.8	81	SW	2	0.9	.....	5cs	5ks	NW	NW	0	0	Cloudy	G. A. Blair.
Charlottetown, P. E. Island	.....	.....	30.16	766.1	28	— 2.2	94	W	3	1.3	.....	2c	0	.....	.....	0	0	Fair	H. J. Cundall, C. E.
Cornwall, Ontario	.....	.....	30.36	771.1	27.2	— 2.7	100	N	.....	.....	1	.....	Fog	.....	.....	0	0	Foggy	James Smith, M. A.
Dalhousie, N. B	.....	.....	30.12	765.0	27.0	— 2.8	77	W	.....	.....	1	.....	.....	.....	.....	0.0	0.0	Clear	H. A. Johnson.
Esquimault, B. C	.....	.....	29.99	761.7	47.3	8.5	100	N	.....	.....	.....	.....	10n	.....	.....	0.12	3.0	Cloudy	W. H. Bevis.
*Father Point, Quebec	.....	.....	30.20	767.1	29	— 1.7	91	SW	19	8.5	.....	.....	10n	.....	.....	0	0	Cloudy	J. McWilliams.
Fredericton, N. B	.....	.....	30.29	769.4	11.1	—11.6	98	Calm	0	0	.....	1c	0	.....	.....	0	0	Clear	Prof. Harrison.
*Fort Garry, Manitoba	.....	.....	29.83	757.7	8	—13.3	96	Calm	0	0	.....	Hazy	Hazy	W	W	0	0	Hazy	James Stewart.
Goderich, Ontario	.....	.....	30.18	766.6	36.9	2.7	84	S	.....	.....	2	.....	10n	.....	.....	0.0	0.0	Threatening	H. J. Strang, M. A.
Granton, Ontario	29.08	738.6	30.24	768.1	30.1	1.1	.....	SE	.....	.....	1	.....	10n	.....	.....	0	0	Cloudy	James Grant.
*Halifax, N. S	.....	.....	30.28	769.1	24	— 4.4	93	W	1	0.4	.....	0	2k8	.....	W	0	0	Fair	F. Allison, M. A.
Hamilton, Ontario	.....	.....	30.32	770.1	28.7	— 1.8	93	W	.....	.....	1	.....	10n	.....	.....	0	0	Dense mist	G. Dickson.
Heart's Content, N. F	.....	.....	30.10	764.5	15	— 9.4	82	W	.....	.....	3	0	0	.....	.....	0	0	Fine	E. Weedon.
*Kingston, Ontario	.....	.....	30.35	770.9	28	— 2.2	96	Calm	0	0	.....	.....	10s	.....	.....	0	0	Smoky	S. Woods, M. A
*Montreal, Quebec	.....	.....	30.36	771.1	26	— 3.3	100	SW	1	0.4	.....	.....	Fog	.....	.....	0	0	Foggy	C. H. McLeod, C. E.
*Ottawa, Ontario	.....	.....	30.36	771.1	25	— 3.9	75	SW	4	1.8	.....	.....	Fog	.....	.....	0	0	Foggy	J. B. Haney.
*Parry Sound, Ontario	.....	.....	30.25	768.3	26	— 3.3	88	SE	11	4.9	.....	6k	6k8	SE	SE	0.0	0.0	Cloudy	Rev. R. Mosley.
Port Dover, Ontario	.....	.....	30.32	770.	23	— 5.0	86	NE	5	2.2	.....	10k	0	W	.....	0	0	Fair	H. Morgan.
Port Hastings, N. S	.....	.....	30.15	765.8	30.7	— 0.7	.....	W	8	3.6	.....	.....	.....	.....	.....	0	0	Fine	Peter Grant.
Port Stanley, Ontario	.....	.....	30.27	768.8	30	— 1.1	88	E	12	5.4	.....	.....	10k8	.....	SW	0	0	Cloudy	M. Payne.
*Quebec, Quebec	.....	.....	30.36	771.1	26	— 3.3	88	NW	3	1.3	.....	.....	10n	.....	NW	0	0	Cloudy	Capt. Ashe, R. N.
*Rockliffe, Ontario	.....	.....	30.30	769.6	27	— 2.8	98	E	6	2.7	.....	.....	10s	.....	SE	Inap.	Inap.	Light snow	
St. John, N. B	.....	.....	30.31	769.9	24.0	— 4.4	87	SW	2	0.9	.....	0	0	.....	.....	0	0	Clear	G. Murdoch, C. E.
*Saugeen, Ontario	.....	.....	30.13	765.3	35	1.7	80	SE	8	3.6	.....	.....	10n	.....	.....	0	0	Cloudy	K. Stewart.
Stayner, Ontario	.....	.....	30.23	767.8	28	— 2.2	98	SE	8	3.6	.....	.....	10n	.....	SE	0.0	0.0	Cloudy	R. J. Cole.
Stratford, Ontario	28.91	734.3	30.27	768.8	26.8	— 3.2	95	SE	7	3.1	.....	.....	10s	.....	.....	0	0	Cloudy	C. J. MacGregor, M. A.
*Sydney, C. B	.....	.....	30.15	765.6	20	— 6.7	88	SW	10	4.6	.....	8ck	0	NW	.....	0	0	Fair	T. C. Hill.
*Toronto, Ontario	.....	.....	30.31	769.9	30	— 1.1	98	E	6	2.7	.....	.....	Fog	.....	.....	0	0	Foggy	Magnetic Observatory.
Woodstock, Ontario	.....	.....	30.27	768.8	26.9	— 3.3	97	E	6	2.7	.....	.....	10s	.....	.....	0.0	0.0	Cloudy	J. Montgomery.
SUB-SERIES.																			
St. Johns, Newfoundland	.....	.....	30.16	765.8	14.0	—10.0	82	NW	.....	.....	.....	.....	.....	.....	.....	0.0	0.0	Fair	John Delany

NOTE.—The originals for Brockville, Charlottetown, Port Dover, Port Stanley, Stayner, St. Johns, N. F., and those telegraphed, give the amount of cloudiness by the scale 0 to 4. The elevation of Granton is 1,015 feet, or 309.4 m.; Stratford, 1,182 feet, or 360.4 m.

UNITED STATES SERIES.

Furnished by the coöperation of Bvt. Brig. Gen. Albert J. Myer, Chief Signal Officer, U. S. Army.

STATIONS.	BAROMETER. Corrected for instrum'tal error and temperature. Inches.	BAROMETER. Corrected for instrum'tal error and temperature. Millimeters.	BAROMETER. Reduced to sea-level. Inches.	BAROMETER. Reduced to sea-level. Millimeters.	TEMPERATURE OF THE AIR. Fahrenheit.	TEMPERATURE OF THE AIR. Centigrade.	RELATIVE HUMIDITY. Per cent.	WIND. Direction. From—	WIND. Velocity. Miles per hour.	WIND. Velocity. Meters per second.	WIND. Force. 0—10.	CLOUDS. Amount. Up'er 0—10.	CLOUDS. Amount. Low'r 0—10.	CLOUDS. Direction. Upper. From—	CLOUDS. Direction. Lower. From—	RAIN-FALL OR MELTED SNOW IN THE PAST 24 HOURS. Inches	RAIN-FALL OR MELTED SNOW IN THE PAST 24 HOURS. Millimeters.	WEATHER.	OBSERVER.
Albany, N. Y.	.....	.....	30.47	773.9	20	— 6.7	85	Calm	0	0	.....	.....	Fog	.....	.....	0	0	Foggy	
Alpena, Mich.	.....	.....	30.04	763.0	33	0.(	89	SE	12	5.4	.....	.....	10s	.....	SE	0.02	0.5	Cloudy	
Atlantic City, N. J.	.....	.....	30.50	774.7	28	— 2.2	89	Calm	0	0	.....	1c	Haze	W	.....	0	0	Clear	
Augusta, Ga.	.....	.....	30.50	774.7	40	4.4	91	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Baltimore, Md.	.....	.....	30.49	774.4	33	0.(	79	Calm	0	0	.....	Haze	Sm'e	.....	.....	0	0	Smoky	
Barnegat, N. J.	.....	.....	30.51	774.9	26	— 3.3	88	Calm	0	0	.....	2cs	Haze	.....	.....	0	0	Fair	
Bismarck, Dakota	28.08	713.2	29.80	756.9	22	— 5.(	72	NW	1	0.4	.....	0	0	.....	.....	0	0	Clear	
Boston, Mass.	.....	.....	30.43	772.9	32	0.(	79	SW	8	3.6	.....	4cs	Haze	NW	.....	0	0	Fair	
Breckenridge, Minn.	.....	.....	29.84	757.9	14	—10.(	82	W	10	4.5	.....	0	0	.....	.....	Inap.	Inap.	Clear	
Buffalo, N. Y.	.....	.....	30.28	769.1	27	— 2.8	83	E	3	1.3	.....	2c	Sm'e	.....	.....	0	0	Fair	
Burlington, Vt.	.....	.....	30.42	772.7	26	— 3.3	76	S	3	1.3	.....	.....	10s	.....	.....	0	0	Cloudy	
Cairo, Ill.	.....	.....	30.26	768.6	54	12.2	43	S	7	3.1	.....	0	8s	.....	.....	0	0	Fair	
Cape Hatteras, N. C.	.....	.....	30.41	772.4	46	7.8	85	NE	8	3.6	.....	0	Haze	.....	.....	0	0	Clear	
Cape Henry, Va.	.....	.....	30.51	774.9	35	1.7	95	NW	4	1.8	.....	0	Fog	.....	.....	0	0	Fair	
Cape Lookout, N. C.	.....	.....	30.48	774.2	42	5.(	100	NE	5	2.2	.....	0	0	.....	.....	0	0	Clear	
Cape May, N. J.	.....	.....	30.49	774.4	33	0.(	89	E	3	1.3	.....	0	0	.....	.....	0	0	Clear	
Charleston, S. C.	.....	.....	30.46	773.7	47	8.3	77	N	7	3.1	.....	0	Haze	.....	.....	0	0	Clear	
Cheyenne, Wyoming	24.05	610.9	29.99	761.7	37	2.8	52	W	20	8.9	.....	5ck	2s	.....	.....	0	0	Fair	
Chicago, Ill.	.....	.....	29.96	761.0	48	8.9	77	SW	14	6.3	.....	.....	10s	.....	SW	0.10	2.5	Cloudy	
Cincinnati, Ohio	.....	.....	30.22	767.6	47	8.3	62	S	3	1.3	.....	.....	10ks	.....	W	Inap.	Inap.	Cloudy	
Cleveland, Ohio	.....	.....	30.22	767.6	41	5.(	73	SE	12	5.4	.....	.....	10s	.....	.....	0	0	Cloudy	
Corsicana, Tex.	.....	.....	30.27	768.8	54	12.2	86	S	4	1.8	.....	.....	10s	.....	.....	0	0	Cloudy	
Davenport, Iowa	.....	.....	30.01	762.2	42	5.(	91	SW	12	5.4	.....	0	0	.....	.....	0.19	3.3	Clear	
Denison, Tex.	.....	.....	30.26	768.6	56	13.3	86	S	8	3.6	.....	.....	10s	.....	S	0.01	0.3	Cloudy	
Denver, Col.	24.86	631.2	30.07	763.8	30	— 1.1	68	S	5	2.2	.....	.....	8s	.....	.....	0	0	Cloudy	
Detroit, Mich.	.....	.....	30.13	765.3	41	5.(	73	S	4	1.8	.....	.....	10s	.....	.....	0	0	Cloudy	
Dodge City, Kan.	27.58	699.2	29.95	760.7	26	— 2.2	88	NW	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Dubuque, Iowa	.....	.....	29.94	760.5	38	3.3	80	SW	4	1.8	.....	.....	10s	.....	W	0.35	8.9	Cloudy	
Duluth, Minn.	.....	.....	29.63	752.6	37	2.8	90	SW	4	1.8	.....	.....	10s	.....	SW	0.73	18.5	Cloudy	
Eastport, Me.	.....	.....	30.31	769.9	24	— 4.4	80	Calm	0	0	.....	0	Haze	.....	.....	0	0	Clear	
Erie, Pa.	.....	.....	30.2?	767.8	38	3.3	80	SE	20	8.9	.....	8ck	Haze	.....	.....	0	0	Fair	
Escanaba, Mich.	.....	.....	29.78	756.4	36	2.2	90	S	13	5.8	.....	.....	10n	.....	.....	0.20	5.1	Light rain	
Fort Gibson, Indian Ter.	.....	.....	30.18	766.6	51	10.(	78	SE	3	1 3	.....	0	2s	.....	SW	Inap.	Inap.	Fair	
Ft. St. Michael, Alaska	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Fort Sill, Indian Ter.	29.00	736.6	30.13	765.3	48	8.9	77	S	2	0.9	.....	.....	Fog	.....	.....	0.07	1.8	Foggy	
Fort Sully, Dakota	28.21	716.5	29.90	759.4	35	1.7	91	NW	2	0.9	.....	0	0	.....	.....	0	0	Clear	
Florence, Arizona	28.58	726.2	30.12	765.0	55	12.8	.....	N	.....	.....	.....	0	0	.....	.....	0	0	Clear	
Galveston, Tex.	.....	.....	30.31	769.9	58	14.4	93	E	4	1.8	.....	8cs	Fog	.....	.....	0	0	Cloudy	
Grand Haven, Mich.	.....	.....	29.98	761.5	48	8.9	83	S	24	10.7	.....	.....	10s	.....	SW	0.26	6.6	Cloudy	
Indianapolis, Ind.	.....	.....	30.17	766.3	48	8.9	71	S	4	1.8	.....	.....	10s	.....	.....	Inap.	Inap.	Cloudy	
Indianola, Tex.	.....	.....	30.28	769.1	57	13.9	93	E	5	2.2	.....	.....	10s	.....	.....	0	0	Cloudy	
Jacksonville, Fla.	.....	.....	30.4?	772.7	45	7.2	92	Calm	0	0	.....	.....	Fog	.....	.....	0	0	Foggy	
Keokuk, Iowa	.....	.....	30.02	762.5	45	7.2	84	W	12	5.4	.....	.....	10s	.....	W	0.31	7.9	Cloudy	
Key West, Fla.	.....	.....	30.21	767.3	67	19.4	83	NE	20	8.9	.....	5cs	0	.....	.....	0	0	Fair	
Kittyhawk, N. C.	.....	.....	30.50	774.7	38	3.3	100	N	6	2.7	.....	Haz	Haz	.....	.....	0	0	Hazy	
Knoxville, Tenn.	.....	.....	30.47	773.9	35	1.7	80	Calm	0	0	.....	6ck	0	W	.....	0	0	Cloudy	
La Crosse, Wis.	.....	.....	29.84	757.9	39	3.9	100	SW	14	6.3	.....	.....	10n	.....	SW	0.22	5.6	Light rain	
Leavenworth, Kan.	.....	.....	30.12	765.0	36	2.2	80	S	3	1.3	.....	0	0	.....	.....	0.26	6.6	Clear	
Louisville, Ky.	.....	.....	30.27	768.8	49	9.4	64	S	6	2.7	.....	.....	10s	.....	S	Inap.	Inap.	Threatening	
Lynchburg, Va.	.....	.....	30.32	770.2	32	0.(	80	Calm	0	0	.....	10ck	0	W	.....	0	0	Cloudy	
Malone, N. Y.	.....	.....	30.34	770.6	21	— 6.1	85	Calm	0	0	.....	8c	0	N	.....	0	0	Cloudy	
Marquette, Mich.	.....	.....	29.70	754.4	43	6.1	75	SE	12	5.4	.....	.....	10s	.....	.....	0	0	Cloudy	
Memphis, Tenn.	.....	.....	30.33	770.4	53	11.7	59	S	4	1.8	.....	.....	10s	.....	.....	0	0	Cloudy	
Milwaukee, Wis.	.....	.....	29.90	759.4	41	5.(	91	SW	13	5.8	.....	.....	10s	.....	SW	0.22	5.6	Cloudy	
Mobile, Ala.	.....	.....	30.40	772.1	43	6.1	91	S	4	1.8	.....	5cs	Fog	W	.....	0	0	Fair	
Montgomery, Ala.	.....	.....	30.44	773.2	42.5	5.8	91	Calm	0	0	.....	0	Fog	.....	.....	0	0	Foggy	
Morgantown, W. Va.	29.25	74?.?	30.36	771.1	34	1.1	79	Calm	0	0	.....	.....	10s	.....	SW	Inap.	Inap.	Cloudy	
Mt. Washington, N. H.	23.93	607.8	30.20	769.4	21	— 6.1	85	NW	36	16.1	.....	5cs	1s	NW	.....	0	0	Fair	
Nashville, Tenn.	.....	.....	30.32	770.1	48	8.9	70	Calm	0	0	.....	10k	Fog	SW	.....	0.01	0.3	Cloudy	
New Haven, Conn.	.....	.....	30.49	774.4	28	— 2.2	77	Calm	0	0	.....	1?2c	Fog	.....	.....	0	0	Foggy	
New London, Conn.	.....	.....	30.47	773.9	29	— 1.7	78	Calm	0	0	.....	2c	Fog	N	.....	0	0	Fair	
New Orleans, La.	.....	.....	30.36	771.1	49.5	9.7	96	E	1	0.4	.....	7c	Fog	W	.....	0	0	Fair	
Newport, R. I.	.....	.....	30.48	774.2	33	0.6	79	SW	5	2.2	.....	8c	0	SW	.....	0	0	Fair	
New York, N. Y.	.....	.....	30.51	774.9	30	— 1.1	78	W	4	1.8	.....	5c	Fog	W	.....	0	0	Fair	
Norfolk, Va.	.....	.....	30.50	774.7	34	1.1	100	N	4	1.8	.....	.....	Fog	.....	.....	0	0	Foggy	
North Platte, Neb.	27.12	688.8	29.80	756.9	25	— 1.7	89	W	14	6.3	.....	0	0	.....	.....	0	0	Clear	
Omaha, Neb.	28.90	734.0	30.01	762.2	37	2.8	80	SW	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Oswego, N. Y.	.....	.....	30.36	771.1	26.3	— 3.?	88	SE	7	3.1	.....	2k	5s,4z.	NW	.....	0	0	Cloudy	
Pembina, Dakota	.....	.....	29.89	757.7	2	—16.7	86	W	4	1.8	.....	0	0s	.....	W	0	0	Fair	
Philadelphia, Pa.	.....	.....	30.51	774.9	34	1.1	79	NW	2	0.9	.....	2c	Fog	.....	.....	0	0	Fair	
Pike's Peak, Col.	17.78	451.6	29.99	761.7	12	—11.1	70	SW	20	8.9	.....	0	0s	.....	.....	0	0	Fair	
Pittsburgh, Pa.	.....	.....	30.3?	770.1	33	0.6	84	E	1	0.4	.....	.....	Fog	.....	.....	0	0	Foggy	
Port Huron, Mich.	.....	.....	30.14	765.8	35	1.7	80	S	8	3.6	.....	.....	10s	.....	.....	0.01	0.3	Threatening	
Portland, Me.	.....	.....	30.37	771.4	22	— 5.6	85	Calm	0	0	.....	2c	Haze	W	.....	0	0	Hazy	
Portland, Oregon	.....	.....	30.03	762.7	48	8.9	92	Calm	0	0	.....	.....	10s	.....	S	0.40	10.2	Cloudy	
Punta Rassa, Fla.	.....	.....	30.37	771.4	61.0	16.1	79	NE	9	4.0	.....	2c	0	SE	.....	0	0	Fair	
Rochester, N. Y.	.....	.....	30.31	769.9	20	— 1.7	83	SW	4	1.8	.....	5c	2s	W	W	0	0	Fair	
Salt Lake City, Utah	5.83	656.1	30.16	766.1	31	— 0.6	89	NW	4	1.8	.....	.....	10s	.....	.....	0	0	Cloudy	
Sandy Hook, N. J.	.....	.....	30.47	773.9	32	0.0	89	W	8	3.6	.....	0	Haz	.....	.....	0	0	Clear	
San Diego, Cal.	.....	.....	30.17	766.3	51	10.6	93	NE	4	1.8	.....	5c	0	NE	.....	0	0	Fair	
San Francisco, Cal.	.....	.....	30.18	766.6	55	12.8	93	E	2	0.9	.....	.....	10n	.....	SW	1.69	40.4	Light rain	
Santa Fé, N. M.	23.37	593.6	29.91	759.7	31	— 0.6	41	N	8	3.6	.....	0	0	.....	.....	0	0	Clear	
Savannah, Ga.	.....	.....	30.46	773.7	45	7.2	92	E	2	0.9	.....	0	Sm'e	.....	.....	0	0	Smoky	
Shreveport, La.	.....	.....	30.36	771.1	53	11.7	86	S	2	0.9	.....	.....	10s	.....	.....	0	0	Cloudy	
Smithville, N. C.	.....	.....	30.47	773.9	43	6.1	91	NE	6	2.7	.....	0	5ks	.....	SW	0	0	Fair	
Springfield, Mass.	.....	.....	30.48	774.2	16.5	— 8.6	82	Calm	0	0	.....	.....	Fog	.....	.....	0	0	Foggy	
St. Louis, Mo.	.....	.....	30.15	765.8	55	12.8	68	SW	12	5.4	.....	.....	10s	.....	.....	0.02	0.5	Cloudy	
St. Marks, Fla.	.....	.....	30.42	772.7	44	6.7	98	SE	2	0.9	.....	.....	10s	.....	SW	0	0	Cloudy	
St. Paul, Minn.	.....	.....	29.73	755.1	35	1.7	90	SW	12	5.4	.....	.....	10s	.....	.....	0.44	11.2	Cloudy	
St. Paul's Island, Alaska	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Thatcher's Island, Mass.	.....	.....	30.40	772.1	31	— 0.6	79	SW	16	7.2	.....	2cs	0	NW	.....	0	0	Hazy	
Toledo, Ohio.	.....	.....	30.16	766.1	45	7.2	60	S	10	4.5	.....	.....	10k	.....	S	0	0	Cloudy	
Tucson, Arizona	27.07	702.8	30.22	767.6	36	2.2	.....	SE	.....	.....	.....	2c	0	W	.....	0	0	Fair	
Tybee Island, Ga.	.....	.....	30.44	773.2	48	8.9	85	NE	6	2.7	.....	0	Sm'e	.....	.....	0	0	Smoky	
Vicksburg, Miss.	.....	.....	30.41	772.4	49	9.4	77	S	4	1.8	.....	8cs	Sm'e	W	S	0	0	Fair	
Virginia City, M. T.	24.32	617.7	29.80	756.9	32.5	0.3	74	NE	3	1.3	.....	10c	0	W	.....	Inap.	Inap.	Cloudy	
Washington, D. C.	.....	.....	30.51	774.9	29	— 1.7	89	Calm	0	0	.....	5c	.8	.....	.....	0	0	Smoky	
Wilmington, N. C.	.....	.....	30.47	773.9	41	5.0	83	NE	6	2.7	.....	0	2ks	.....	SW	0	0	Fair	

UNITED STATES SERIES.—CONTINUED.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Upper. 0—10.	Clouds. Amount. Low'r. 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Wood's Holl, Mass.	.....	.....	30.49	774.4	35	1.7	90	SW	5	2.2	.....	5c	0	W	.....	0	0	Fair	
Yankton, Dakota	28.69	728 7	30.02	762.5	33	0.6	79	SW	2	0.9	.....	0	8s	.....	W	0	0	Cloudy	
Yuma, Arizona	.....	.....	30.06	763.5	59	15.0	.....	NW	.....	.....	.....	0	0	.....	.....	0	0	Clear	
Sub-Series.																			
Kingston, Jamaica, W. I.	.....	.....	30.24	768.1	73	22.2	75	Calm	0	0	.....	5c	2s	NE	.....	0	0	.....	James Gall.
Navassa, W. I.	.....	.....	.....	.....	77	25.0	.....	NE	.....	.....	3	.....	.....	.....	.....	0	0	.....	F. M. Everett.
Clifton, Ja., W. I.	27.24	691.9	30.04	763.0	64	17.8	89	NE	1.0	0.4	.....	.....	10k	.....	.....	1.47	37.3	Raining	C. Partridge.
Paramaribo, D. Guiana, S.A	.....	.....	30.02	762.5	79	26.1	78	E	.....	.....	1	3c	5k	E	.....	0	0	Fair	C. J. Hering.
Batavia, Dutch Guiana, S.A	30.04	762.9	.....	.....	76.1	24 5	.....	E	.....	.....	.....	.....	.....	.....	.....	0.551	14.00	Rainy	Dr. H. Groot.
Medellin, Colombia, S. A.	25.20	640.1	.....	.....	64 7	18.1	84	Calm	.....	.....	0	5k	3ks	.....	.....	0	0	Cloudy	Thomas Herran.
York Factory, B. A.	.....	.....	29.79	756.7	—21.0	—29.4	.....	W	4	1.8	.....	2c	0	W	.....	0	0	Fair	J. Fortescue, W. Wood
Honolulu, Oahu, H. I.	.....	.....	30.00	762.0	71	21.7	95	SW	.....	.....	2	.....	.....	.....	.....	0.46	11.7	Squally	Daniel Smith.
Makawao, Maui, H. I.	.....	.....	29.86	758.4	70	21.1	71	S	.....	.....	2	0	8k	.....	.....	0	0	.....	F. L. Clarke.

Note.—The originals give the amount of cloudiness by the scale 0 to 4, except York Factory, Makawao, Medellin and Paramaribo. The elevation of the barometer at Bismarck is 1,677 feet, or 511.1 meters; Cheyenne, 6,057.3 ft., or 1,846.2 m.; Clifton, about 2,80 ft., or 881.5 m.; Denver, 5,135 ft., or 1,565.2 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Florence, 1,550 (?) ft., or 472.5 (?) m.; Makawao, 2,205 ft., or 672.1 m.; Morgantown, 1,027.9 ft., or 313.3 m.; Medellin, 4,876 ft., or 1,486.2 m.; Mt. Washington, 6,285 ft., or 1,915.6 m.; North Platte, 2,846 ft., or 867.4 m.; Omaha, 1,054.6 ft., or 321.4 m.; Pike's Peak, 14,150.7 ft., or 4,313.1 m.; Salt Lake City, 4,362.2 ft., or 1,329.6 m.; Santa Fe, 6,862.2 (?) ft., or 2,091.6 (?) m.; Tucson, 2,513 (?) ft., or 772.1 (?) m.; Virginia City, 5,480 (?) ft., or 1,670.3 (?) m.; Yankton, 1,278 ft., or 389.5 m. The following constants are added in correcting the barometric observations for altitude: Cheyenne, 5.04 inches; Denver, 5.22 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fe, 6.54 in.; Tucson, 2.53 in.; Virginia City, 5.48 in. The elevation of Batavia is about 6 feet; the barometric readings need the addition of 0.2 mm. or 0.01 in. for reduction to sea-level.

UNITED STATES NAVAL CHRIST

By authority of the **SECRETARY OF THE NAVY.**
Furnished by the cooperation of the Navy Department, through Commodore Daniel Ammen, U. S. N., Chief of Bureau of Navigation.

STATIONS AND VESSELS.	True course toward—	Hourly rate in knots.	*Barometer as reported.		Temperature of the Air.		Relative Humidity.	Wind.			Clouds.				Rain-fall or melted snow in the past 24 hours.		State of Ocean.	Direction of swell from—	Weather.	Observer.
								Direction.	Velocity		Force.	Amount.		Direction.							
			Inches.	Millimeters.	Fahrenheit.	Centigrade.	Per cent.	From—	Miles per hour.	Meters per second.	0—10.	Up'er 0—10.	Low'r 0—10.	Up'er From—	Low'r From—	Inches.	Millimeters.				
Naval Academy, Annapolis, Md.			30.13	765.3	80	— 1.1	88	S&E			0-1		2			0.60	20.3			Hazy.
Naval Hospital, Annapolis, Md.			30.50	774.7	29	— 1.7	100	Calm			0		3			0	0			Mist & fog.
Navy Yard, Mare Island, Cal.			30.26	768.6	55.6	13.1	97	SE			3		10		N	0.860	21.84			Rainy.
Navy Yard, Norfolk, Va.			30.58†	776.7†	33	0.6		Calm			0		10n							Foggy
Navy Yard, Pensacola, Fla.			30.45	773.4	54	12.2	93	NE			1		7		NE	0	0			†D. clouds.
Navy Yard, Portsmouth, N.H.			30.36	771.1	21	— 6.1		WSW			2									Fine.
Adams, Port Royal, S. C.			30.49	774.4	63	11.7	86	NE			2		1							Hazy.
Ajax, Port Royal, S. C.			30.05	763.3	47	8.3		N			2		0							Pleasant.
Canonicus, New Orleans, La.			30.04	763.0†	44	6.7	100	Calm			0									Foggy
Catskill, Port Royal, S. C.			30.44	773.2†	65	18.3		N			3		0					Rippling.		Fair
Colorado, New York, N. Y.			30.58	776.7	31	— 0.6		Var.			0-1		5			0	0			Foggy
Dictator, Port Royal, S. C.			30.47	773.9	46	7.8	100	NNE			1		0			0	0			Hazy.
Essex, Norfolk, Va.			30.48	774.2	37	2.8	90	N			1		10							Foggy
Hartford, Hampton Roads, Va.			30.62	777.7	34	1.1		NNW			1					0	0			Dense fog.
Huron, Port Royal, S. C.			30.60	774.7	49.6	9.7	93	NE			1-2		0							Hazy.
Lehigh, Port Royal, S. C.			30.55†	776.0†	47	8.3	92	S			2		5		NW					Pleasant.
Manhattan, Port Royal, S. C.			30.42	772.7†	49	9.4		N			2		1		NW			Smooth		†D. clouds.
Michigan, Erie, Pa.			30.15	765.8	33	3.3	90	SE			1		10		E					Cloudy
Monongahela, Baltimore, Md.			30.49	774.4	32	0.0		Calm			0									Misty
New Hampshire, Port Royal, S. C.			30.64	778.2	51	10.6	100	NNE			1		9					Smooth		‡D. clouds.
Omaha, Panama.			30.02	762.5	75	23.9	90	NW			2		4		S	0	0	Smooth		Pleasant.
Ossipee, New Orleans, La.			30.42	772.7	47	8.3		ESE			1		8		W					Foggy
Pensacola, Panama.			30.07	763.8	76	24.4	86	NW			2		7		S&E					†D. clouds.
Plymouth, Pensacola, Fla.			30.44	773.2	67	19.6	81	ENE			2		4		E	0	0			Misty
¶ Rio Bravo, Matamoras, Mex.			29.99	761.7	62	16.7	94	SE			1		1		SW					†D. clouds.
Santee, Annapolis, Md.			30.02	762.5	30	— 1.1		S&E			1		2							Hazy.
St. Louis, League Island, Pa.			30.34	770.6	29	— 1.7		Calm			0		2		SW	0	0			Fair
Tallapoosa, Washington, D. C.			30.37	771.4	28	— 2.2	88	Calm			0		4		S&E					†D. clouds.
Wabash, Boston, Mass.			30.60	777.2	28	— 2.2		WSW			2		8							†D. clouds.
Wyoming, Washington, D. C.			30.55	776.0†	28	— 2.2		Calm			0		7							†D. clouds.

* It is not understood that the barometer is corrected for temperature, instrumental error, or elevation. † Aneroid Barometer. ‡ Detached clouds. ¶ Barometer corrected for instrument error and reduced to sea-level.

UNITED STATES MARINE SERIES

REPORTED TO THE OFFICE OF THE CHIEF SIGNAL OFFICER OF THE ARMY.

NAMES OF VESSELS.	True course toward—	Hourly rate in knots.	Barometer reduced to sea-level.		Temperature of the Air.		Relative Humidity.	Wind.				Clouds.				State of Ocean.	Direction of swell from—	Weather.	OBSERVER.
								Direction.	Velocity.		Force.	Amount.		Direction.					
												Up'er	Low'r	Upper.	Lower.				
			Inches.	Millimeters.	Fahrenheit.	Centigrade.	Per cent.	From—	Miles per hour.	Meters per second.	0—10.	0—10.	0—10.	From—	From—				
PACIFIC MAIL S. S. CO. MARINE SERIES. Furnished by the coöperation of ————, President; Williams, Blanchard & Co., Agents.																			
S. S. City of Peking																			Lt. Z. L. Tanner, U.S.N
OCCIDENTAL AND ORIENTAL S. S. CO. MARINE SERIES. Furnished by the coöperation of George H. Bradbury, President; T. H. Goodman, Agent.																			
S. S. Belgic																			Capt. John Metcalf.
S. S. Gaelic																			Capt. W. H. Kidley.
S. S. Oceanic																			Capt. H. Parsell.
NORTH GERMAN LLOYD OF BREMEN MARINE SERIES. Furnished by the coöperation of A. Schumacher & Co., Agents.																			
S. S. Baltimore																			Capt. H. Andressen.
S. S. Berlin																			Capt. C. Pohle.
S. S. Braunschweig																			Capt. K. Undütsch.
S. S. Nürnberg																			Capt. A. Jaeger.
S. S. Ohio																			Capt. G. Meyer.
MARINE SERIES. (Miscellaneous.) Furnished by the coöperation of Captain James Jorgensen.																			
Schooner Addie Fuller, at Brunswick, Ga			30.30	769.6	56	13.3	81	E	2	0.9		0	0					Clear	Capt. James Jorgensen

NOTE.—The schooner Addie Fuller gives the amount of cloudiness by the scale 0 to 4.

COLLATED AT THE OFFICE OF THE CHIEF SIGNAL OFFICER OF THE ARMY, WASHINGTON, D. C.

The records which appear in this Bulletin are copied from the regular exchanges of this office, made in each instance in compliance with an especial request and are published for the uses of the coöperating observers. The barometric readings in the first two columns are reduced to freezing and their respective standards; those in the second two also to mean sea-level. The "weather" is generally published as given.

When the distinction between the upper and lower strata of clouds is not reported, the *kinds or types*, viz: cirrus, cumulus, stratus, nimbus, scud, fracto, pallio, haze, fog and smoke, as indicated, respectively, by the letters c, k, s, n, d, f, p, hz., fg. and sm'e, are generally published with the amount in the lower-cloud column. The distinction between the upper and lower strata is carefully made in the United States Series and a portion of the Canadian Series, and the types are indicated by the above letters or their combinations in the proper column.

Albert J. Myer

Brig. Gen. (Bvt. Asst.) Chief Signal Officer, U. S. A.

BULLETIN

OF

INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON FEBRUARY 1, 1877.

7:35 A. M. WASHINGTON mean time.

6:7 A. M. MEXICO mean time.
7:7 A. M. SAN JOSE mean time.
0:6 P. M. LISBON mean time.
0:28 P. M. MADRID mean time.
0:43 P. M. GREENWICH mean time.
0:53 P. M. PARIS mean time.
1:1 P. M. BRUSSELS mean time.
1:4 P. M. UTRECHT mean time.
1:13 P. M. BERNE mean time.

1:26 P. M. CHRISTIANIA mean time.
1:33 P. M. COPENHAGEN mean time.
1:33 P. M. ROME mean time.
1:37 P. M. BERLIN mean time.
1:49 P. M. VIENNA mean time.
1:55 P. M. STOCKHOLM mean time.
2:18 P. M. ATHENS mean time.
2:39 P. M. CONSTANTINOPLE mean time.
2:44 P. M. ST. PETERSBURG mean time.

10:2 P. M. TOKEI mean time.

ALGERIAN SERIES.

Furnished by the coöperation of General d'Eudeville, Commandant Supérieur du Génie in Algeria.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Nemours			30.31	769.9	68.0	20.0		S			2		1			0	0	Clear	Michel.
Algiers			30.24	768.2	61.5	16.4		NE			2		9			0.059	1.4	Hidden	Biscarrat.
La Calle			29.98	761.4	55.4	13.0		NW			6		7			1.102	28.0	Cloudy	Fleury.
Tunis			29.91	759.8	50.2	10.1		NW			5		7			0.354	9.0	Cloudy	Jacques.
Sfax																			
Saida			30.26	768.7	57.6	14.2		NW			4		3			0	0	Fair	Millot.
Tebessa			29.96	761.0	39.2	4.0		W			5		6			0	0	Fair	Bourgeois.
Geriville			30.15	765.9	43.0	6.1		W			5		3			0	0	Fair	Lemaillot.
Laghonat			30.11	764.9	53.6	12.0		N			6		2			0	0	Clear	Guyot.
Biskra			30.08	763.9	62.6	17.0		NW			5		3			0	0	Fair	Kuntz.

NOTE.—In the originals the distinction between the amount of upper and lower clouds is apparently not made. The weather is published as given. The rain-fall is measured at 7 a. m., local time.

AUSTRIAN SERIES.

Furnished by the coöperation of Professor Ferdinand Osnaghi, Director of the Imperial and Royal Central Meteorological Institute at Vienna.

Agram			30.13	765.2	31.8	— 0.1	90	NE			1		6			0	0		Prof. Ivan Stozir.
Cracow, I. R. Observatory			30.03	762.8	33.4	0.8	96	W			2		10			0	0		Dr. Wierzbiski.
Eperies			30.02	762.5	33.4	0.8	80	S			2		10			0	0		Julius Mikolik.
Gratz	28.80	731.5	30.10	764.6	37.4	3.0	68	SSE			4		3			0	0		Andreas Rospini.
Hermannstadt	28.56	725.4	30.06	763.4	30.9	— 0.6	73	SSW			1		0			0	0		Prof. Reissenberger
Kremsmünster	28.77	730.7	30.17	766.3	35.2	1.8	75	W			2		10			0.031	0 8		Prof. C. Wagner.
Lemberg			29.94	760 4	33.4	0.8	98	NW			2		10			0	0		Dr. T. Stanecki.
Nyiregyhaza																			Habzsuda Daniel.
Pola			30.02	762 6	46.0	7.8	48	ENE			2		18			0	0		I.R.Hydrographic Office.
Szegedin			30.05	763.2	35.6	2.0	75	Calm			0		6			0	0		Karl Stancel.
Trieste			30.08	764.0	46.2	7.9	37	NE			1		0			0	0	Clear	Prof. V. Faroffi.
Vienna			30.10	764.6	38.7	3.7	60	WNW			3		3			0	0		I. R. Central Met. Obs'y.

NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 7 p. m., local time. The elevation of Gratz is 348.5 meters, or 1,126.9 feet: Hermannstadt, 407.8 meters, or 1,337.9 feet; Kremsmünster, 383.6 meters, or 1,258.5 feet.

BELGIAN SERIES.

Furnished by the coöperation of J. C. Houzeau, Director of the Royal Observatory at Brussels.

Arlon			30.13	765.3	34.9	1.6	97	WSW			2		10			0.119	2.9		
Brussels			30.03	762.8	41.9	5.5	92	SW			2		10		SW	0.118	0.30	Sprinkling	Royal Observatory.
Furnes			29.98	761.5	48.7	9.3	97	WNW			2		10			0.035	0.9		
Maeseyck			30.05	763.2	40.8	4 9	86	SSW			2		10			0.008	0.2		

NOTE.—In the originals, the weather is occasionally given in general notes.

BRITISH SERIES

Furnished by the coöperation of Robert H. Scott, Esq., Director of the Meteorological Office, London, Alexander Buchan, Secretary of the Scottish Meteorological Society, Edinburgh, and the respective Observers.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Aberdeen			29.73	755.1	41.6	5.3		SW	12	5.4			9			0.180	4.57	Misty	William Boswell.
Ardrossan			29.77	756.1	48	8.9		S			3		8					Overcast	William McNeil.
Armagh, Observatory			29.80	756.9	49.9	9.9		S	15	6.7			10					Gloomy	S. Call, for Dr. Robinson.
Bidston (Liverpool Obs.)			29.93	760.2	50.0	10.0		SW	12	5.4			10					Overcast	John Hartnup.
Birr Castle, (Parsonstown)			29.86	758.4	52.9	11.6		SW			1		10					Drizzling	J. Dreyer.
Bradford																			J. McLandsborough.
Bridgetown, (Barbados)			30.01	762.2	80.5	26.9		NE			3		7					*D. clouds	Sergt. J. F. Halanen, A.
Cambridge, Observatory			30.00	762.0	49.5	9.7		WSW			1		10					Overcast	H. Todd. [H. C.
Cardington			30.00	762.0	49.0	9.4		W			1		10					Overcast	John McLaren.
Carlisle																			T. Bell, for J. Cartmell.
Chatham, School M. E.			30.06	763.5	50.2	10.1		Calm			0		10					Overcast	Capt. Fellows, R. E.
Dartmoor	28.64	727.4	30.19	766.8	40.6	4.7		W			3		10					Rain & fog	R. E. Power.
Davos Platz, (Switzerland)	24.83	630.7			26.2	— 3.2	39	NE			1		3			0.252	6.40	*D. clouds	Francis Redford, M. A.
Donaghadee			29.80	756.9	49	9.4		S			3		10					Overcast	J. Mac Gowan.
Dover			30.01	762.2	50	10.0		WNW			2		8					Gloomy	J. Costello.
Eccles, (near Manchester)			29.93	760.2	50.1	10.1		SW	2.2	1.0			10					Misty	Thomas Mackereth.
Falmouth, Observatory			30.12	765.0	50.9	10.5		WSW			2		10					Overcast	The Staff.
Fort Napier, (Natal)	27.54	699.5	29.78	756.4	82.0	27.8		NE			2		7					*D. clouds	P'vt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.90	759.4	86.0	30.0		W			0		2					*D. clouds	
Galway, Queen's College			29.76	755.9	50	10.0		W			5		10					Gloomy	Prof. A. H. Curtis.
Gibraltar, (Mediterranean)			30.27	768.8	64.7	18.2		N			4		0					Blue sky	Corpl. C. Aitken, A. H. C.
Glasgow, Observatory			29.74	755.4	48.8	9.3		SW			1		10					Overcast	Lewis Stuart.
Great Yarmouth			29.96	761.0	47	8.3		WNW			2		8					Foggy	G. T. Watson.
Greenwich, Royal Obs'y			30.03	762.7	48.8	9.3		WSW			1		10			Blank	Blank	Overcast	The Staff, for G. B. Airy.
Guernsey			30.11	764.8	52	11.1		WSW			3		5					*D. clouds	Dr. S. E. Hoskins.
Helston			29.71?	760.0?	51	10.6		SW			2		10n			0.13	3.3	Showery	M. P. Moyle.
Holyhead			29.91	759.7	50	10.0		SSW			4		10					Misty	John Tilston.
Kew, Observatory			30.03	762.7	48.9	9.4		WSW	7	3.1			10					Overcast	The Staff.
Kingstown			29.87	758.7	53	11.7		SW			3		8					Overcast	George Mitchell.
Leicester Museum			29.97	761.2	49.4	9.7		SW			1		10					Overcast	Wm. J. Harrison, F.G.S.
Malta, (Mediterranean)			29.61	752.1	56.6	13.7		SW			3		8k					*D. clouds	Corp'l. P. Bravis, A. H. C.
Nairn			29.60	751.8	46	7.8		W			1		8					½ clouded	W. D. Penny.
Nassau, (Bahamas)			30.30	769.6	71.5	21.9		NE			3		2					*D. clouds	Surg. Maj. Henry.
Nottingham, Observatory			29.97	761.2	48.3	9.1		SW			3		10k		SW	0.030	0.76	Overcast	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			29.99	761.7	48.0	8.9		SSW			2		10					Misty	Rev. Stephen Whitty.
Oxford, Radcliffe Obs'y			30.01	762.2	50	10.0		WSW			1		8					Overcast	J. Lucas.
Plymouth			30.09	764.3	49.2	9.6		WSW			1		10					Overcast	John Merrifield.
Roche's Point			29.95	760.7	52	11.1		WSW			4		10					Raining	W. Kennedy.
Saint Ann's Head			30.01	762.2	50	10.0		WSW			3		10					Foggy	John C. Walker.
Saint Helier, (Jersey)			30.14	765.5	53.0	11.7		W			4		8					¾ clouded	A. P. Amy.
Sandwick Manse, (Orkneys)			29.55	750.6	42	5.6		S	28	12.5			10					Drizzling	Rev. C. Clouston, LL. D.
Scarborough																			F. Shaw.
Scutari Cemetery, (Turkey)			30.00	762.0	43.2	6.2		NE			1		8					*D. clouds	Sergt. W. H. Lyne.
Sheffield			29.99	761.7	51.6	10.9		SW			1		8			0.036	1.68	Overcast	W. F. Cooper.
Siloth Rectory			29.83	757.7	49.4	9.7	90	SW			6		7			0.290	7.37	*D. clouds	Rev. Francis Redford
Stonyhurst, Observatory			29.92	760.0	48.0	8.9		SW			2		10					Overcast	Rev. S. J. Perry.
Stornoway, Lews C., (Hebr.)			29.47	748.5	47	8.3		SW			5		10					Raining	John Smith.
Stratfield Turgiss			30.04	763.0	50.3	10.2		W			1		10					*D. clouds	Rev. Charles H. Griffith.
Thurso			29.55	750.6	44	6.7		SSE			3		8					Gloomy	John Trotter.
Truro, Royal Institution			30.09	764.3	53	11.7		W			7		10					Raining	W. Newcombe.
Valencia, Observatory			29.89	759.2	52.1	11.2		SW	34	15.2			10					Misty	The Staff.
SUB-SERIES.																			
Calf of Man, (Isle of Man)																			Henry Mercer.
Cape Good Hope, Obs'y			29.97	761.2	82.6	28.1	42	E	6	2.7		4	2						The Staff, for E. J. Stone.
Hobart Town, (Tasmania)			29.62	752.3	68.5	20.3	88	NW			1		8k			0	0	Cloudy	Francis Abbott, F. R. A. S.
Leith, Restalrig Park			29.77	756.1	49.9	9.9		W			2		10k			0.15	3.8	Cloudy	Andrew Gibb.
Mauritius, Observatory			29.7?	756.7				NW	9.0	4.0						0.14	3.6		C. Meldrum.
Melbourne, Observatory			30.12	765.0	57.4	14.1	66	W	14	6.3			9			0	0	Dull	R. L. J. Ellery.
Monach L't-house, (Hebrides)																			J. Youngclause.
North Unst, (Shetland Is.)			29.55	750.6	40	4.4		S			8		10			Blank	Blank		Robert Burnet.

NOTE.—Generally, the originals do not give the relative humidity, rain-fall, or distinction between upper and lower clouds. The originals give the wind direction to 32 points and weather by the Beaufort notation. The originals give the barometer for Aberdeen, Cardington, Galway, Oxford, St. Helier, Sandwick, Scarborough, Stonyhurst, Leith, Monach and North Unst as read off and the amount of cloudiness for Stornoway by the scale 0 to 4. The wind-force is given by the scale 0 to 12 in the official series; 0 to 6 in the sub-series; except in lbs. per square foot for Greenwich and Hobart Town. The rain-fall is measured at Aberdeen at 10 a. m.; Bradford, 9 a. m.; Hobart Town, 7:30 a. m.; Nottingham, 6 p. m.; Mauritius, 9 a. m., local time. The elevation of Dartmoor is 1,400 feet, or 426.7 meters; Davos Platz, 5,105? feet, or 1,556.6? meters; Fort Napier, 2,200 feet, or 670.6 meters. *Detached clouds.

By authority of the
MINISTER OF FOREIGN AFFAIRS.

COSTA RICA SERIES.

Furnished by the coöperation of Senor Federico Maison, Director of the Central Office of Statistics and Meteorology.

San José																			

DANISH SERIES.

Furnished by the coöperation of Captain N. Hoffmeyer, Director of the Royal Danish Meteorological Institute at Copenhagen.

Copenhagen			30.07	763.8	29.1	— 1.6	78	NNE			4		0						
Fanöe			30.13	765.3	32.5	0.3	76	E			2		0						
Godthaab, (Greenland)			29.28	743.7	- 0.8	—18.2	100	NNE			4		10					Snowing	
Thykkisholm, (Iceland)			27.91	708.8	34.7	1.5	96	NE			6		10					Snowing	
Shorshavn, (Faröe)			29.13	739.8	38.8	3.8	88	SW			6		10					Raining	
Vestervig			30.11	764.7	32.0	0.0	85	N			2		0						

NOTE.—The originals give the wind-force by the scale 0 to 6; occasionally, weather by Vienna symbols; no distinction between the amount of upper and lower clouds.

FRENCH SERIES.

Furnished by the co operation of His Excellency, U. J. Le Verrier, Director of the Paris Observatory, and the respective Observers.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather	Observer.
Alençon	.....	.....	30.19	766.8	44.6	7	88	NW	.....	.....	2	.....	10cn	.....	NW	0.031	0.8	Covered	Normal School.
Amiens	.....	.....	30.04	763.0	48.9	9.4	97	SW	.....	.....	3	.....	10	.....	.....	0	0	Covered	Normal School.
Avignon	.....	.....	30.13	765.4	46.4	8	77	N	.....	.....	6	.....	5	.....	N	0	0	Cloudy.....	Normal School.
Bar-sur-Seine	.....	.....	30.13	765.2	38.8	3.8	97	SSW	.....	.....	2	.....	10	.....	.....	0.248	6.3	Raining.....	C. Saillard.
Beaumette, (near Angers)	.....	.....	30.18	766.6	49.8	9.9	81	W	4.5	2.0	.....	.....	.....	.....	NW	0	0	.....	Beaumette Observ'tory.
Beauvais	.....	.....	30.11	764.7	49.1	9.5	86	WNW	.....	.....	3	.....	10	.....	NW	0.187	4.75	Covered	Normal School.
Besançon	.....	.....	30.22	767.5	40.3	4.6	77	SSE	.....	.....	2	.....	10	.....	.....	0	0	Covered	Normal School.
Bourg en Bresse	.....	.....	30.27	768 8	35.6	2	89	S	.....	.....	2	.....	10n	.....	N	.....	.....	Raining.....	Normal School.
Bourges	.....	.....	30.21	767.2	47.7	8.7	94	WSW	.....	.....	2	.....	5	.....	WSW	0.193	4.9	Cloudy.....	Normal School.
Brest	.....	.....	30.14	765.5	54.5	12.5	78	W	.....	.....	3	.....	8	.....	W	0.049	1.25	Misty	Naval Observatory.
Carcassonne	.....	.....	30.24	768.0	49.3	9.6	76	W	.....	.....	4	.....	10	.....	E	0.08	2.	Covered	Normal School.
Caen	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Chartres	.....	.....	30.15	765.8	48.6	9.2	86	SW	.....	.....	2	.....	9	.....	SE	0.138	3.5	.....	Normal School.
Châlons-sur-Marne	.....	.....	30.10	764.4	40.1	4.5	100	SSE	.....	.....	2	.....	10	.....	.....	0.322	8.2	Misty.....	Normal School.
Clermont	.....	.....	30.14	765.6	48.0	8.9	73	WSW	.....	.....	4	.....	8	.....	NW	0	0	.....	Puy de Dome Obs'y.
Commercy	.....	.....	30.09	764.2	37.6	3.1	95	SW	.....	.....	4	.....	10	.....	.....	0.055	1.4	Covered	Normal School.
Commune de Gréasque*	.....	.....	30.11	764.7	49.8	9.9	40	NW	.....	.....	4	.....	5	.....	NW	0	0	.....	M. Kina.
Grenoble	.....	.....	30.25	768.3	39.4	4.1	61	ENE	.....	.....	1	.....	10n	.....	NE	0	0	Covered	Normal School.
La Roche-sur-Yon	.....	.....	30.19	766.9	50.7	10.4	90	W	.....	.....	2	.....	5	.....	E	0.118	3.0	Cloudy.....	Normal School.
Le Mans	.....	.....	30.19	766.7	49.3	9.6	86	N	.....	.....	2	.....	8	.....	NNW	0.04	1.	Very cloudy	Normal School.
Lons-Le-Saulnier	.....	.....	30.21	767.3	38.3	3.5	83	S	.....	.....	1	.....	10	.....	.....	0.307	7.80	Raining.....	Normal School.
Lorient	.....	.....	30.24	768.0	54.7	12.6	70	WSW	.....	.....	2	.....	5	.....	W	0.028	0.7	Cloudy.....	Naval Observatory.
Mâcon	.....	.....	30.20	768.7	50.0	10	66	S	.....	.....	1	.....	10	.....	.....	0.087	2.2	Covered	Normal School.
Metz	.....	.....	30.17	766.3	36.7	2.6	91	S	.....	.....	3	.....	10	.....	.....	0	0	Covered	M. Schuster.
Mirecourt	.....	.....	30.26	768.5	35.8	2.1	96	W	.....	.....	2	.....	10	.....	E	0	0	Covered	Normal School.
Nismes	.....	.....	30.15	765.9	50.7	10.4	72	N	.....	.....	2	..c	.....	N	.....	0	0	.....	Normal School.
Orleans	.....	.....	30.11	764.7	48.2	9	95	NW	.....	.....	1	.....	10	.....	.....	0.12	3.	Covered	Normal School.
Paris, Observatory	.....	.....	30.11	764.8	49.8	9.9	83	WNW	.....	.....	2	.....	10n	.....	W	0.179	4.54	Covered	National Observatory.
Parthenay	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Privas	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Rochefort, Observatory	.....	.....	30.19	766.7	44.2	6.8	.....	NW	.....	.....	1	.....	5	.....	NW	0	0	Cloudy.....	Naval Observatory.
Rouen	.....	.....	30.20	769.3	53.1	11.7	86	WNW	.....	.....	4	.....	10	.....	ESE	0	0	Covered	Normal School.
Saint Lo	.....	.....	30.11	764.8	50.4	10.2	86	W	.....	.....	2	.....	10	.....	W	0.272	6.9	Covered	Normal School.
Tarbes	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Villefranche	29.19	741.3	30.28	769.0	55.4	13	64	W	.....	.....	2	.....	2	.....	E	0	0	Slightly cl'dy	Normal School.
	.....	.....	30.26	768.5	40.6	4.8	90	S	.....	.....	1	.....	10	.....	.....	0.04	1.	Covered	Normal School.
SUB-SERIES.																			
Fort de France, Martinique	.....	.....	29.90	759.5	75.6	24.2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	L'Abbé Marchésl.
Marseilles	.....	.....	30.07	763.8	52.0	11.1	41	NW	.....	.....	3	.....	6	.....	.....	0	0	Partly cl'dy.	Marseilles Observatory.
Mont-Louis	24.98	634.4	30.29	769.4	42.6	5.9	46	S	5.6	2.50	.....	.....	2	.....	NNE	0	0	.....	—. Falguère.
Montsouris, Paris	.....	.....	30.10	764.4	49.6	9.7	89	WNW	.....	.....	2	.....	10	.....	WNW	0.240	6.1	.....	Montsouris Observatory
Perpignan	.....	.....	30.17	766.2	58.5	14.7	62	NW	33.6	15.00	.....	.....	5	.....	NW	0	0	.....	Dr. Fines.
Pic du Midi, (Summit,) H. P.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. Baylac.
Pic du Midi, (Plantade,) H. P.	22.65	575.4	.....	.....	34.7	1.5	.....	N	.....	.....	2	.....	1	.....	.....	0.571	14.5	Clear.....	General de Nansouty.
Saint Maur, (near Paris)	.....	.....	30.10	764.6	49.6	9.8	88	WNW	.....	.....	1	.....	10	.....	.....	0.287	7.3	Covered	E. Renou.
Toulouse	.....	.....	30.31	769.8	51.8	11.0	86	WNW	.....	.....	3	.....	10	.....	.....	0.063	1.6	.....	Toulouse Observatory.
Tours	.....	.....	30.19	766.8	48.9	9.4	86	WNW	.....	.....	1	.....	10	.....	WNW	0.020	0.5	.....	C. Marquet.
Versailles, (near Paris)	.....	.....	30.11	764.7	49.3	9.6	92	NW	.....	.....	1	.....	10	.....	.....	0.256	6.49	Covered.....	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai)	.....	.....	30.35	770.8	36.0	2.2	93	NNW	14.9	6.67	.....	.....	10	.....	.....	0.270	7.0	Rainy.....	Marc Dechevrens, S. J.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—Generally, the originals give the wind-force by the scale 0 to 7; no distinction between upper and lower clouds, and, in the official series, the amount by the scale 0 to 4; the rain-fall as measured at 7, 8 or 9 a. m., local time; at Clermont, 9 a. m. of the following day; the weather in general terms as published. The elevation of Clermont is 388 meters, or 1,272.9 feet; Commune de Gréasque, 322 meters, or 1,056.4 feet; Tarbes, 308 meters, or 1,010 feet; Mont-Louis, 1,583.40 meters, or 5,204.8 feet; Pic du Midi, (Summit,) 2,877 meters, or 9,439.1 feet; Pic du Midi, (Plantade,) 2,333 meters, or 7,762.6 feet. In correcting the Mont-Louis barometric observations for altitude, the constant 135. millimeters has been added. *Bouches-du-Rhône

GERMAN SERIES.

Furnished by the coöperation of Professor Dr. G. Neumayer, Director of the German Naval Observatory, Hamburg.

Bamberg	.....	.....	30.10	764.5	36.5	2.5	75	W	.....	.....	3	.....	9	W	.....	0.030	1.0	.....	Prof. T. Hoh.
Berlin	.....	.....	30.11	764.9	34.7	1.5	74	SW	.....	.....	4	.....	7	.....	.....	0.102	2.6	.....	Prof. Arndt.
Breslau	.....	.....	30.04	763.0	31.8	— 0.1	75	WNW	.....	.....	5	.....	10	.....	.....	0.010	0.4	.....	Royal University Obs'y.
Carlsruhe	.....	.....	30.15	765.9	40.6	4.8	78	SW	.....	.....	3	.....	10	.....	.....	0	0	.....	A. Senz.
Cassel	.....	.....	30.13	765.2	35.2	1.8	91	SSW	.....	.....	2	.....	6	WSW	.....	0	0	.....	Dr. H. Möhl.
Crefeld	.....	.....	30.09	763.5	42.6	5.9	77	SE	.....	.....	2	.....	9	.....	.....	0	0	.....	Director Lose.
Emden	.....	.....	30.21	767.4	37.6	3.1	91	SE	.....	.....	0	.....	0	.....	.....	0	0	.....	Prof. Prestel.
Frankfort on the Main	.....	.....	30.17	766.3	38.3	3.5	84	SSW	.....	.....	1	.....	10	.....	.....	0.028	0.7	.....	Physical Society.
Friedrichshafen	28.72	729.6	30.21	767.4	39.4	4.1	86	SW	.....	.....	1	.....	10	.....	.....	0	0	Föhn.....	M. Wilhelm.
Hamburg	.....	.....	30.11	764.9	35.2	1.8	87	NW	.....	.....	2	.....	0	.....	.....	0	0	Clear.....	Captain F. Hegemann.
Kiel	.....	.....	30.21	767.2	32.4	0.2	81	NW	.....	.....	2	.....	0	.....	.....	0	0	.....	Prof. G. Karsten.
Königsberg, (Prussia)	.....	.....	29.85	758.1	27.9	— 2.3	90	NE	.....	.....	2	.....	10	.....	.....	0.138	3.5	.....	Prof. E. Luther.
Koslin	.....	.....	29.99	761.7	32.2	0.1	.....	NW	.....	.....	1	.....	10	.....	.....	Inap.	Inap.	Snowing.....	H. Müller.
Leipsic	.....	.....	30.13	765.3	37.4	3.0	89	W	.....	.....	3	.....	8	WNW	.....	0.303	7.7	.....	Prof. Bruhns.
Memel	.....	.....	29.87	758.6	28.4	— 2.0	80	NE	.....	.....	2	.....	10ks	.....	.....	0.043	1.1	Foggy	Reimbrecht & Skalweit.
Münster	.....	.....	29.91	759.6	40.3	4.6	88	SW	.....	.....	2	.....	10	.....	.....	0	0	.....	Prof. E. Heis.
Neufahrwasser	.....	.....	29.92	760.0	33.1	0.6	92	NW	.....	.....	2	.....	10	.....	.....	0.051	1.3	Snowing.....	A Lothe.
Posen	.....	.....	29.93	761.8	32.4	0.2	98	NW	.....	.....	6	.....	10	.....	.....	0.031	0.8	.....	Dr. Mngener.
Strassburg, (in Alsace)	.....	.....	30.18	766.5	40.5	4.7	77	SW	.....	.....	2	.....	10	.....	.....	0	0	.....	Dr. Schur.
Stuttgart	.....	.....	30.16	766.0	39.6	4.2	70	W	.....	.....	1	.....	10	.....	.....	0.016	0.4	Rain & snow	Prof. Schoder.
Thorn	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Dr. Hasenbalg.
Treves, (Trier)	.....	.....	30.06	763.4	39.0	3.9	83	W	.....	.....	4	.....	10	.....	.....	0.071	1.8	Foggy	Prof. Flesch.
Weissenburg, (Bavaria)	28.59	726 2	30.10	766.1	36.4	1.9	72	W	.....	.....	1	.....	9	WNW	.....	0.134	3.4	.....	Dr. von Bebber.
Wustrow, Naval School	.....	.....	30.11	764.9	32.0	0.0	83	N	.....	.....	3	.....	0	.....	.....	0	0	.....	E. F. Schütz.
GERMAN NAVAL SERIES.																			
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—The elevation of Friedrichshafen is 413.4 meters, or 1,356.3 feet; Weissenburg, 481 meters, or 1,414.0 ft. In the originals the distinction between the amount of upper and lower clouds is not made. It is not always certain that the remarks in the weather column refer to the moment of observation.

GREEK SERIES.

Furnished by the coöperation of Professor Dr. J. F. Julius Schmidt, Director of the Royal Observatory at Athens.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Athens			29.96	760.9	50.4	10.2		NE										Cloudy	

Note.—The originals give the barometer corrected, but not reduced to sea-level; occasionally the kind of clouds; the weather as published. They omit the humidity, wind-force, amount of cloudiness and rain-fall.

ITALIAN SERIES.

Furnished by the coöperation of His Excellency the Minister of Agriculture, Industry and Commerce, and the respective Observers.

Udine			30.05	763.3	44.8	7.1	24	SW	0.7	0.3			0			0	0		Prof. Giovanni Clodgl.
Stelvio	21.98	558.4			8.2	—13.2		E			1		3	S		0	0		Signora Ernesta Manfredi.
Valdobbia	22.02	559.2			17.8	— 7.9	69	W			2		7	N		0	0		Ab. Dom. Mongini.
Padua			30.07	763.6	44.2	6.8	38	ESE	2.5	1.1			0			0	0		Prof. Dott. Lorenzoni.
Vicenza			30.07	763.6	45.1	7.3	45	SE	4.9	2.2			0			0	0		Conte Alm. Da Schio.
Verona			30.04	762.9	44.6	7.0	64	E			1		0			0	0		Dott. B. Bertoncelli.
Bergamo	28.70	729.0	30.07	763.6	43.2	6.2	20	SSW			2		1			0	0		Prof Trionfini Carlo.
Domodossola			30.07	763.7	42.8	6.0	28	Calm	0	0			4			0	0		Prof. Giuseppe Ulzn.
Milan			30.09	764.2	46.2	7.9	78	SE			2		1	S		0	0		Ab. Gio. Capelli
Pavia			30.08	764.1	44.2	6.8	36	NE			1		3	NE		0	0		Prof. Gio. Cantoni.
Moncalieri			30.10	764.4	43.9	6.6	72	NNE	2.5	1.1			4	N		0	0		Prof. P. F. Denza.
Mondovi	28.12	714.2	30.09	764.3	40.6	4.7	24	NW			4		1	N		0	0		Prof. D. C. Bruno.
Porto Maurizio			30.07	763.7	53.2	11.8	12	E			6		5	N		0	0		Prof. L. Vassallo.
Genoa			30.04	763.1	51.3	10.7	17	N	3.8	1.7			0			0	0		Prof. G. M. Garibaldi.
Piacenza			30.10	764.4	44.8	7.1	36	SE	2.5	1.1			0			0	0		Dott. G. Manzi.
Parma			30.09	764.3	43.2	6.2	67	SW			2		1			0	0		Prof. P. Pigorini.
Florence			30.04	763.0	47.3	8.5	37	NE			6		0			0	0		Cav. F. Meucci.
Leghorn			30.01	762.2	49.1	9.5	19	NE	11.2	5.0			0			0	0		Prof. P. Monte.
Siena	28.74	730.1	29.99	761.7	44.1	6.7	34	ENE	10.5	4.7			1	E		0	0		Prof. L. Toscani.
Urbino	28.42	721.9	30.04	763.1	41.2	5.1	57	NNE			4		9			0.079	2.0	Raining	Prof. P. Sermieri.
Pesaro			30.02	762.6	46.6	8.1	58	NE	39.1	17.5			6	E		0	0		Prof. Luigi Guidi.
Ancona			30.01	762.3	47.7	8.7	54	E			2		2	E		0.024	0.6		Prof. F. De— Rosis.
Grosseto			29.96	761.0	50.4	10.2	43	NNE			6		2	SE		0	0		Avv. P. Ponticelli.
Rome			29.82	757.5	52.9	11.6	38	N	19.2	8.6			1			0	0		Prof's. P. Secchi & L. Respighi.
Naples, O. U			29.80	757.0	49.3	9.6	54	NE			6		10	NE		0.012	0.3	Light rain	Prof. L. Palmieri.
Lecce			29.72	754.8	49.3	9.6	87	SSE	17.4	7.8			10			1.244	31.6		Prof. C. De—Giorgi.
Cosenza			29.75	755.7	50.7	10.4	80	WNW	7.4	3.3			9			0.075	1.9	Raining	Prof. F. D. Conti.
Cagliari			29.86	758.4	55.2	12.9	25	NW			4		0			0	0		Prof. A. Pacinotti.
Ilposto, (Sicily)			29.61	752.0	54.7	12.6	53	N			2		9	S		0	0		Prof. F. Caffero.
Palermo			29.63	752.6	54.0	12.2	63	WSW	4.3	1.9			7			0.467	11.6	Raining	Prof. G. Cacciatore.
Caltanissetta	27.73	704.3	29.74	755.5	43.7	6.5	77	NW			6		7	NE		0	0		Prof. A. Pagani.
Siracusa			29.69	754.0	51.8	11.0	75	WNW			2		10	NNE		0.079	2.0	Rain & snow	Prof. V. Giuliano.
Sub-Series.																			
Naples, S. R.			29.83	757.6	46.0	7.8	61	ENE	10.5	4.7			10	NE		0	0		Prof. F. Brioschi.

Note.—The originals give the wind-force by the scale 0 to 4, or the velocity in kilometers per hour; generally, no distinction between upper and lower clouds, occasionally the weather by the Vienna symbols. The elevation of Stelvio is 2,543.0 meters, or 8,342.9 feet; Valdobbia, 2,548.0 meters or 8,359.3 feet; Bergamo, 379.6 meters, or 1,245.3 feet; Mondovi, 556 meters, or 1,824.2 feet; Siena, 348.5 meters, or 1,143.3 feet; Urbino, 451 meters, or 1,479.7 feet; Caltanissetta, 570.3 meters, or 1,871.0 feet.

JAPANESE SERIES.

Furnished by the coöperation of the Imperial University of Tokei, Japan.

Tokei			29.99	761.7	31	—0.6		N	10	4.5			5			0	0		Prof. P. V. Weeder.

Note.—The originals give the amount of cloudiness by the scale 0 to 4 without distinguishing between upper and lower clouds. The rain-fall is measured at 7 a. m., cal time.

MEXICAN SERIES.

By authority of the Secretary of Public Works.

Furnished by the coöperation of Senor Mariano Barcena, Director of the Central Meteorological Observatory in the City of Mexico.

Mexico																			Mariano Barcena. Vicente Reyes. Miguel Perez. (Engineers in charge.)

Note.—The elevation of Mexico is 2,290 meters, or 7,512.9 feet. The rain-fall is measured at 6 a. m., local time.

NETHERLANDS' SERIES.

Furnished by the coöperation of Professor Buys Ballot, Director of the Royal Meteorological Institute of the Netherlands at Utrecht.

Flushing			30.03	762.8	42.8	6.0		SW			3					0.051	1.3		
Groningen			30.01	762.3	37.6	3.1										0	0		
Helder			30.03	762.8	40.3	4.6		SSE			2					0.012	0.3		
Utrecht			30.01	762.2	40.5	4.7	72	S			2		10			0.008	0.2	Overcast	

Note.—The originals give the wind-pressure in kilograms per square meter; for Utrecht, they give the weather as published, from which the amount of cloudiness is taken by the scale 0 to 4, without distinguishing between upper and lower clouds. It is assumed that the barometer readings have been reduced to sea-level.

NORWEGIAN SERIES.

Furnished by the coöperation of Professor H. Mohn, Director of the Royal Norwegian Meteorological Institute at Christiania.

Bergen			30.00	762.1	34.0	1.1	52	S	15.2	6.8			4			0.091	2.3		
Brönö			30.06	763.4	28.4	— 2.0	72	Calm	0	0			0			0	0		
Christiania			30.15	765.9	19.8	— 6.8	84	SW	0	0			10			0	0		
Tromsö			30.04	763.0	22.6	— 5.2	76	SW	8.9	4			0			0	0		

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols. The cloudiness and weather at Bergen refer to 2h., p. m., local time, instead of 1h., 4 min.

PORTUGUESE SERIES.

Furnished by the coöperation of J. C. de Brito Capello, Director of the Meteorological Observatory of the Infante Don Luiz at Lisbon.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Angra, (Azores)	.....	.....	30.31	767.4	59.9	15.5	93	SW	13.0	5.8	.....	.....	10	.....	.....	0.126	3.2	Raining.....	Dr. J. A. Sampaio.
Campo Major	.....	.....	30.36	771.2	59.9	15.5	59	SE	3.8	1.7	.....	.....	2	.....	.....	0	0	.....	Dr. A. M. R. dos Santos.
Funchal, (Madeira)	.....	.....	30.36	771.2	63.7	17 6	59	E	6.3	2.8	.....	.....	0	.....	.....	0	0	.....	Capt. D. A. de Cunha.
Lisbon	.....	.....	30.41	772.4	57.0	13.9	78	NE	6.3	2.8	.....	.....	5	WSW	.....	0	0	.....	The Observatory.
Ponta Delgada, (Azores)	.....	.....	30.30	769.6	62.2	16.8	90	SSW	6.9	3.1	.....	.....	8	.....	.....	0	0	....	
.....																			

Note.—The originals give the wind-velocity in kilometers per hour; occasionally, the weather by the Vienna symbols; the amount of cloudiness without distinguishing between upper and lower clouds; the barometer corrected but not reduced to sea-level. The rain-fall at Libson is measured at noon, instead of 0 h. 6 m., p. m.

RUSSIAN SERIES.

Furnished by the cooperation of Professor H. Wild, Director of the Imperial Central Physical Observatory of Russia, at St. Petersburg.

Warsaw	.....	.....	29.85	758.2	33.1	0.6	94	WSW	20	9	.....	.....	10	.....	.....	.....	.....	Snowing.....	Astronomical Obs.
Wilna	.....	.....	29.89	759.2	22.6	— 5.2	72	ESE	2	1	.....	.....	10	.....	.....	.....	.....	.....	Astronomical Obs.
Dorpat	.....	.....	30.00	761.9	22.6	— 5.2	83	S	2	1	.....	.....	10	.....	.....	.....	.....	.....	Physical Cabinet.
St. Petersburg	.....	.....	30.01	762.3	18.9	— 7.3	88	SSE	9	4	.....	.....	10	.....	.....	.....	.....	Light snow..	Central Physical Obs.
Knopio	.....	.....	29.94	760.4	19.8	— 6.8	100	Calm	0	0	.....	.....	10	.....	.....	.....	.....	....	Ch. Forsten.
Kieff	.....	.....	30.07	763.6	19.0	— 7.2	98	S	9	4	.....	.....	10	.....	.....	.....	.....	Light snow..	Physical Cabinet.
Nikolaiev	.....	.....	30.15	765.9	24.3	— 4.3	86	Calm	0	0	.....	.....	10	.....	.....	.....	.....	.....	Kurdakof.
Kertch	.....	.....	30.12	765.1	30.6	— 0.8	90	N	7	3	.....	.....	10	.....	.....	.....	.....	.....	Lagorio.
Moscow	.....	.....	30.27	768.8	11.1	—11.6	82	S	11	5	.....	.....	10	.....	.....	.....	.....	Light snow..	Meteorological Obs.
Lugan	.....	.....	30.05	763.3	18.3	— 7.6	81	N	4	2	.....	.....	10	.....	.....	Blank	Blank	.....	Meteorological Obs.
Archangel	.....	.....	30.00	761.9	15.8	— 9.0	94	S	9	4	.....	.....	10	.....	.....	.....	.....	.....	Ogorodnikof.
Tiflis	....	.....	30.00	761.9	15.8	— 9.0	94	S	9	4	.....	.....	10	.....	.....	.....	.....	.....	Ogorodnikof.
Astrakhan	28.45	722.6	29.87	758 6	51.1	10.6	47	NW	22	10	.....	.....	1	.....	.....	.....	.....	.....	Physical Observatory.
Kasan	.....	.....	30.10	764.4	24.1	— 4.4	81	E	11	5	.....	.....	10	.....	.....	Blank	Blank	.....	Sebastianof.
Orenburg	.....	.....	30.45	773.5	3.4	—15.9	76	SE	4	2	.....	.....	9	.....	.....	.....	.....	.....	Physical Cabinet.
Ekaterinburg	.....	.....	29.78	756.4	4.1	—15.5	76	SE	20	9	.....	.....	10	.....	.....	.....	.....	.....	Tschernischei.
Nukuss	29.43	747.5	30.47	773.9	10.4	—12.0	43	WSW	7	3	.....	.....	10	.....	.....	.....	.....	.....	Meteorogical Obs.
Kasaly	.....	.....	30.20	767.0	19.0	— 7.2	84	ENE	9	4	.....	.....	9	.....	.....	.....	.....	.....	
Tashkend	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Bobrof.
Barnaul	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Michelson.
Yeniseisk	.....	.....	29.85	758.3	—12.1	—24.5	81	SW	9	4	.....	.....	10	.....	.....	.....	.....	....	Meteorological Obs.
Irkutsk	.....	.....	30.37	771.3	— 4.2	—20.1	79	NW	2	1	.....	.....	10	.....	.....	.....	.....	Snowing.....	Marks.
Peking, (China)	.....	.....	30.45	773.3	30 4	— 0.9	84	Calm	0	0	.....	.....	9	.....	.....	.....	.....	.....	Usolzef.
Nertchinsk	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Physical Observatory.
Vladivostock	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Meteorological Obs.
Nikolaievsk, on the Amoor	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols; they omit the rain-fall. The elevation of Tiflis is 409 meters, or 1,341.8 feet; Ekaterinburg, 306. 4 ? m., or 1,005.2 ? ft.; Tashkend, 494.2 ? m., or 1,621.3 ? ft.; Irkutsk, 392 m., or 1,286 ft.; Nertchinsk, 592.0 ? m., or 1,942.2 ? ft.

SPANISH SERIES.

Furnished by the coöperation of Antonio Aguilar, Director of the Royal Observatory at Madrid, and of Don Cecilio Pujazon, Captain R. N. Director of the Naval Observatory at San Fernando.

Madrid	.....	.....	30.46	773.6	56.3	13.5	61	SW	2.2	1.00	.....	1	0	NW	.....	0	0	Light clouds	Royal Observatory.
San Fernando	.....	.....	30.35	771.0	61.5	16.4	67	SSE	4.9	2.2	.....	1	2	SE	SE	.....	.....	.....	Naval Observatory.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

Note.—The originals give the weather in general terms, as published; rain-fall for San Fernando from preceding to following midnight; wind-velocity for Madrid in kilometers per hour.

SWEDISH SERIES.

Furnished by the coöperation of Professor R. Rubenson, Director of the Royal Swedish Meteorological Institute, at Stockholm, and of Dr. H. H. Hildebrandsson, Chief of the Meteorological Division of the Upsala Observatory.

Haparanda	.....	.....	30.06	763.4	18.0	— 7.8	94	N	.....	.....	4	.....	3	.....	.....	0	0	.....	
Umea	.....	.....	30.14	765.6	17.8	— 7.9	77	Calm	.....	.....	0	.....	0	.....	.....	0	0	.....	
Hernosand	.....	.....	30.15	765.9	21.2	— 6 0	90	Calm	.....	.....	0	.....	5	.....	.....	0	0	.....	
Stockholm	.....	.....	30.02	762.4	28.8	— 1.8	88	NNE	.....	.....	4	.....	10	.....	.....	0.016	0.4	.....	
Wisby	.....	.....	29.95	760.8	31.3	— 0.4	81	ENE	.....	.....	6	.....	10	.....	.....	0.094	2.4	Snowing.....	
Sub-Series.																			
Upsala	.....	.....	30.06	763.5	26.6	— 3.0	79	N	7.8	3.5	.....	.....	0	.....	.....	0.002	0.04	.....	Dr. Hildebrandsson.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

Note.—The originals give the wind-force by the scale 0 to 6, and Upsala also velocity in meters per second; occasionally, the weather by the Vienna symbols, or in general terms; no distinction between the amount of upper and lower clouds. The rain-fall is measured at 8 a. m., local time.

SWISS SERIES.

Furnished by the coöperation of Professor R. Wolf, Director of the Observatory at Zurich, and of Professor E. Plantamour, Director of the Observatory at Geneva.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Geneva	28.76	730.5	30.24	768.2	35.6	2.0	67	SW	.....	.....	1	.....	10	.....	.....	0	0	Covered	The Observatory.
Zurich	28.52	724.5	30.23	767.7	36.0	2.2	63	SE	.....	.....	1	.....	6	.....	.....	0.016	0.4	Cloudy	The Observatory.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—For Geneva the corresponding departures from the normal values are: Barometer, +3.4 mm; Thermometer, —0.4 cent.; Relative Humidity, —8 per cent.

NOTE.—The rain-fall is measured at Zurich at 7 a. m. on the following day. The originals give the barometer corrected but not reduced to sea-level; the wind-force by the scale 0 to 4 for Zurich; the amount of cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The elevation of Geneva is 408 meters, or 1,339 feet, and that of Zurich 470 meters, or 1,542 feet.

TURKISH SERIES.

Furnished by the coöperation of A. Coumbary, Effendi, Director of the Central Observatory at Constantinople, and of Professor C. V. A. Van Dyck, Superintendent of the Lee Observatory at Beirut.

Constantinople	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Fao, (Persian Gulf)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Salonica	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Valona	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Varna	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y	.....	.....	29.97	761.1	54.7	12.6	78	SW	.....	.....	3	.....	10n	.....	SW	1.07	27.2	Raining	Prof. C. V. A. Van Dyck

NOTE.—The originals give the wind-force by the scale 0 to 7, (except Beirut, by the scale 0 to 12, and Constantinople velocity in meters per second;) the weather in general terms as published; no distinction between upper and lower clouds, and, except Constantinople and Beirut, the amount by the scale 0 to 4. It is assumed that the barometer is reduced to sea-level.

CANADIAN SERIES.

Furnished by the cooperation of Professor G. T. Kingston, Director of the Magnetic Observatory at Toronto, and Superintendent of the Meteorological Office of the Dominion of Canada, and the respective Observers. Those marked with a star (*) are also telegraphed daily to the office of the Chief Signal Officer, U. S. Army.

Bathurst, N. B	.....	.....	30.22	767.6	19.6	— 6.9	94	SE	8.0	3.6	.....	.....	10	.....	.....	.....	.....	.....	Hon. J. Ferguson.
Brockville, Ontario	.....	.....	29.91	759.7	40	4.4	.....	SW	3	1.3	.....	2c	2s	W	W	0.08	2.0	Fair	W. R. Bigg.
*Chatham, N. B	.....	.....	30.20	767.1	20	— 6.7	94	NE	5	2.2	.....	.....	10ks	.....	NE	0.01	0.3	Cloudy	G. A. Blair.
Charlottetown, P. E. Island	.....	.....	30.25	768.3	21	— 6.1	94	E	8	3.6	.....	.....	10s	.....	.....	0	0	Cloudy	H. J. Cundall, C. E.
Cornwall, Ontario	.....	.....	29.90	759.4	24.2	— 4.3	100	N	.....	.....	1	.....	Fog	.....	.....	0.175	4.45	Foggy	James Smith, M. A.
Dalhousie, N. B	.....	.....	30.27	768.8	17.5	— 8.1	100	E	.....	.....	4	.....	.....	.....	.....	0.10	2.5	Snowing	H. A. Johnson.
Esquimault, B. C	.....	.....	29.80	756.9	48.3	9.1	93	NE	.....	.....	.....	.....	10n	.....	.....	0.24	6.1	Raining	W. H. Bevis.
*Father Point, Quebec	.....	.....	30.07	763.8	23	— 5.0	93	E	6	2.7	.....	.....	10n	.....	.....	0.05	1.3	Threatening	J. McWilliams.
Fredericton, N. B	.....	.....	30.16	766.1	25.8	— 3.4	90	E	2	0.9	.....	.....	10n	.....	.....	Inap.	Inap.	Cloudy	Prof. Harrison.
*Fort Garry, Manitoba	.....	.....	30.02	762.5	16	— 8.9	98	W	7	3.1	.....	.....	10n	.....	.....	0	0	Cloudy	James Stewart.
Goderich, Ontario	.....	.....	29.92	760.0	36.2	2.3	87	SW	.....	.....	2	.....	10n	.....	.....	0	0	Cloudy	H. J. Strang, M. A.
Granton, Ontario	28.77	730.7	29.90	759.4	38.0	3.3	.....	SW	.....	.....	2	1cs	0	.....	.....	0	0	Clear	James Grant.
*Halifax, N. S	.....	.....	30.19	766.8	30	— 1.1	98	SE	8	3.6	.....	.....	Fog	.....	.....	0	0	Foggy	E. Allison, M. A.
Hamilton, Ontario	.....	.....	29.91	759.7	41.7	5.4	79	SW	.....	.....	1	3ck	0	W	.....	0	0	Bright	G. Dickson.
Heart's Content, N. F	.....	.....	30.36	771.1	5	—15.6	100	NW	.....	.....	2	0	0	.....	.....	0.01	0.3	Fine	E. Weedon.
*Kingston, Ontario	.....	.....	29.93	760.2	36	2.2	90	SW	2	0.9	.....	5c	0	SW	.....	0.05	1.3	Fair	S. Woods, M. A.
*Montreal, Quebec	.....	.....	29.90	759.4	33	0.6	97	S	16	7.2	.....	.....	10	.....	.....	0.11	2.8	Cloudy	C. H. McLeod, C. E.
*Ottawa, Ontario	.....	.....	29.82	757.4	30	— 1.1	78	E	2	0.9	.....	.....	10n	.....	E	0.05	1.3	Threatening	J. B. Haney.
*Parry Sound, Ontario	.....	.....	29.82	757.4	34	1.1	95	S	10	4.5	.....	.....	10n	.....	S	0.12	3.0	Light rain	Rev. R. Mosley.
Port Dover, Ontario	.....	.....	29.96	761.0	36	2.2	90	SW	13	5.8	.....	2ck	0	SW	.....	Inap.	Inap.	Fair	H. Morgan.
Port Hastings, N. S	.....	.....	30.34	770.6	18.8	— 7.3	.....	SE	6	2.7	.....	.....	.....	.....	.....	0.15	3.8	Fine	Peter Grant.
Port Stanley, Ontario	.....	.....	29.98	761.5	32	0.0	98	W	14	6.3	.....	2k	0	W	.....	Inap.	Inap	Clear	M. Payne.
*Quebec, Quebec	.....	.....	29.97	761.2	28	— 2.2	88	NE	19	8.5	.....	.....	10a	.....	NE	0.05	1.3	Cloudy	Capt. Ashe, R. N.
*Rockliffe, Ontario	.....	.....	29.89	759.2	34	1.1	96	E	3	1.3	.....	.....	10s	.....	W	Inap.	Inap.	Cloudy	
St. John, N. B	.....	.....	30.12	765.0	29.0	— 1.7	94	E	5	2.2	.....	.....	10n	.....	.....	0.07	1.8	Light snow	G. Murdoch, C. E.
*Saugeen, Ontario	.....	.....	29.83	757.7	37	2.8	81	SW	12	5.4	.....	.....	10ks	.....	W	0.03	0.8	Cloudy	K. Stewart.
Stayner, Ontario	.....	.....	29.83	757.7	40	4.4	73	W	9	4.0	.....	.....	8n	.....	W	0	0	Cloudy	R. J. Cole.
Stratford, Ontario	28.57	725.7	29.88	758.9	37.3	2.9	86	SW	14	6.3	.....	3cs	4s	W	.....	0	0	Fine	C. J. MacGregor, M. A.
*Sydney, C. B	.....	.....	30.40	772.1	17	— 8.3	82	NE	2	0.9	.....	.....	10s	.....	.....	0	0	Cloudy	T. C. Hill.
*Toronto, Ontario	.....	.....	29.89	759.2	37	2.8	87	SW	9	4.0	.....	.....	10ks	.....	W	0.03	0.8	Cloudy	Magnetic Observatory.
Woodstock, Ontario	.....	.....	29.90	759.4	38.6	3.7	99	SW	18	8.0	.....	8ck	0	.....	.....	0	0	Cloudy	J. Montgomery.
Sub-Series.																			
St. Johns, Newfoundland	.....	.....	30.45	773.4	9.0	—12.8	.....	NW	.....	.....	.....	0	5s	.....	.....	0.02	0.5	Fair	John Delany.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
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.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—The originals for Brockville, Charlottetown, Port Dover, Port Stanley, Stayner, St. Johns, N. F. and those telegraphed, give the amount of cloudiness by the scale 0 to 4. The elevation of Granton is 1,015 feet, or 309.4 m.; Stratford, 1,182 feet, or 360.3 m

UNITED STATES SERIES.

Furnished by the coöperation of Bvt. Brig. Gen. Albert J. Myer, Chief Signal Officer, U. S. Army.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Albany, N. Y.	.....	.....	30.03	762.7	37	2.8	80	SE	8	3.6	.....	.....	10ks	.....	SE	0.07	1.8	Cloudy	
Alpena, Mich.	.....	.....	29.81	757.2	36	2.2	80	W	6	2.7	.....	.....	10s	.....	W	0.01	0.3	Cloudy	
Atlantic City, N. J.	.....	.....	30.20	767.1	38	3.3	90	SW	9	4.0	.....	10ck	Haze	SW	.....	Inap.	Inap.	Cloudy	
Augusta, Ga.	.....	.....	30.41	772.4	46	7.8	92	Calm	0	0	.....	.....	10ks	.....	SE	0	0	Cloudy	
Baltimore, Md.	.....	.....	30.19	766.8	40	4.4	82	Calm	0	0	.....	5ck	Fog	.....	.....	0.01	0.3	Foggy	
Barnegat, N. J.	.....	.....	30.17	766.3	38	3.3	90	SW	14	6.3	.....	8k	0	W	.....	0.06	1.5	Fair	
Bismarck, Dakota	28.21	716.5	29.94	760.5	25	— 3.9	75	NW	1	0.4	.....	0	0	.....	.....	0	0	Clear	
Boston, Mass.	.....	.....	30.08	764.0	43	6.1	75	SW	14	6.3	.....	.....	10s	.....	W	0.07	1.8	Threatening	
Breckenridge, Minn.	.....	.....	30.03	762.7	10	—12.2	79	Calm	0	0	.....	8clc	0	.....	.....	0	0	Cloudy	
Buffalo, N. Y.	.....	.....	29.92	760.0	42	5.6	83	SW	14	6.3	.....	2c	0	W	.....	0.05	1.3	Fair	
Burlington, Vt.	.....	.....	29.97	761.2	41	5.0	73	S	4	1.8	.....	.....	8s	.....	.....	0.09	2.3	Cloudy	
Cairo, Ill.	.....	.....	30.25	768.3	52	11.1	72	S	5	2.2	.....	2k	0	W	.....	0.01	0.3	Fair	
Cape Hatteras, N. C.	.....	.....	30.30	769.6	55	12.8	87	W	10	4.5	.....	.....	8ks	.....	W	0	0	Cloudy	
Cape Henry, Va.	.....	.....	30.28	769.1	50	10.0	79	S	14	6.3	.....	0	Haze	.....	.....	0	0	Clear	
Cape Lookout, N. C.	.....	.....	30.38	771.6	51	10.6	100	W	4	1.8	.....	1k	0	.....	.....	0	0	Clear	
Cape May, N. J.	.....	.....	30.19	766.8	41	5.0	83	S	16	7.2	.....	0	0	.....	.....	0.02	0.5	Clear	
Charleston, S. C.	.....	.....	30.40	772.1	50	10.0	93	SW	3	1.3	.....	5c	Fog	W	.....	0	0	Fair	
Cheyenne, Wyoming	24.15	613.4	30.09	764.3	27	— 2.8	77	W	20	8.9	.....	0	0	.....	.....	0	0	Clear	
Chicago, Ill.	.....	.....	30.00	762.0	43	6.1	75	SW	10	4.5	.....	2cs	0	.....	.....	0	0	Fair	
Cincinnati, Ohio	.....	.....	30.12	765.0	50	10.0	71	SW	6	2.7	.....	0	Sm'e	.....	.....	Inap.	Inap.	Clear	
Cleveland, Ohio	.....	.....	30.03	762.7	44	6.7	84	S	13	5.8	.....	.....	10s	.....	S	0.06	1.5	Cloudy	
Corsicana, Tex.	.....	.....	30.22	767.6	58	14.4	87	S	4	1.8	.....	.....	10s	.....	.....	0.01	0.3	Cloudy	
Davenport, Iowa	.....	.....	30.08	764.0	38	3.3	80	SW	4	1.8	.....	4c	0	W	.....	0	0	Fair	
Denison, Tex.	.....	.....	30.21	767.3	59	15.0	87	S	4	1.8	.....	.....	10s	.....	S	0.02	0.5	Cloudy	
Denver, Col.	24.94	633.5	30.16	766.1	30	— 1.1	68	S	5	2.2	.....	0	0	.....	.....	0	0	Clear	
Detroit, Mich.	.....	.....	29.95	760.7	39	3.9	81	SW	12	5.4	.....	0	0	.....	.....	0.04	1.0	Clear	
Dodge City, Kan.	27.53	699.2	29.90	759.4	35	1.7	90	N	3	1.3	.....	Haz	8s	.....	.....	0	0	Cloudy	
Dubuque, Iowa	.....	.....	30.03	762.7	35	1.7	90	Calm	0	0	.....	5c	0	.....	.....	0	0	Fair	
Duluth, Minn.	.....	.....	29.92	760 0	33	0.6	89	SW	8	3.6	.....	.....	10s	.....	.....	0.03	0.8	Cloudy	
Eastport, Me.	.....	.....	30.11	764.8	35	1.7	100	Calm	0	0	.....	.....	10s	.....	.....	0	0	Cloudy	
Erie, Pa.	.....	.....	29.96	761.0	44	6.7	84	S	22	9.8	.....	0	2s	.....	.....	0.15	3.8	Clear	
Escanaba, Mich.	.....	.....	29.84	757.9	33	0.6	69	SW	4	1.8	.....	0	0	.....	.....	0.02	0.5	Clear	
Fort Gibson, Indian Ter.	.....	.....	30.14	765.5	54	12.2	86	E	4	1.8	.....	2c	2s	.....	SW	0	0	Fair	
Ft. St. Michael, Alaska	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Fort Sill, Indian Ter.	28.92	734.6	30.04	763.0	55	12.8	79	S	1	0.4	.....	.....	10s	.....	.....	0	0	Cloudy	
Fort Sully, Dakota	28.34	719.8	30.05	763.3	36	2.2	70	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Florence, Arizona	28.53	724.6	30.00	763.5	55	12.8	.....	NW	.....	.....	.....	0	0	.....	.....	0	0	Clear	
Galveston, Tex.	.....	.....	30.27	768.8	66	18.3	97	NE	3	1.3	.....	.....	Fog	.....	.....	0.01	0.3	Foggy	
Grand Haven, Mich.	.....	.....	29.94	760.5	38	3.3	85	SW	16	7.2	.....	0	0	.....	.....	0	0	Clear	
Indianapolis, Ind.	.....	.....	30.12	765.0	47	8.3	88	SW	1	0.4	.....	0	Fog	.....	.....	0	0	Clear	
Indianola, Tex.	.....	.....	30.23	767.8	60	15.6	100	SE	7	3.1	.....	.....	10s	.....	.....	0	0	Cloudy	
Jacksonville, Fla.	.....	.....	30.39	771.9	50	10.0	86	Calm	0	0	.....	5ck	Fog	.....	.....	0	0	Foggy	
Keokuk, Iowa	.....	.....	30.05	763.3	42	5.6	83	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Key West, Fla.	.....	.....	30.28	769.1	65	18.3	90	N	12	5.4	.....	0	8ks	.....	.....	0	0	Cloudy	
Kittyhawk, N. C.	.....	.....	30.31	769.9	46	7.8	92	W	8	3.6	.....	0	Haz	.....	.....	0	0	Clear	
Knoxville, Tenn.	.....	.....	30.40	772.1	34	1.1	79	Calm	0	0	.....	1ck	Sm'e	W	.....	0	0	Fair	
La Crosse, Wis.	.....	.....	30.00	762.0	33	0.6	69	S	6	2.7	.....	.....	10s	.....	S	Inap.	Inap.	Cloudy	
Leavenworth, Kan.	.....	.....	30.12	765.0	45	7.2	84	NW	1	0.4	.....	.....	Fog	.....	.....	0	0	Dense fog	
Louisville, Ky.	.....	.....	30.20	767.1	50	10.0	72	S	12	5.4	.....	0	Sm'e	.....	.....	Inap.	Inap	Clear	
Lynchburg, Va.	.....	.....	30.29	769.4	39	3.9	80	Calm	0	0	.....	0	Sm'e	.....	.....	0	0	Smoky	
Malone, N. Y.	.....	.....	29.86	758.4	45	7.2	92	S	11	4.9	.....	.....	10s	.....	SW	0.06	1.5	Cloudy	
Marquette, Mich.	.....	.....	29.80	756.9	38	3.3	71	W	8	3.6	.....	.....	10s	.....	.....	0	0	Cloudy	
Memphis, Tenn.	.....	.....	30.31	769.9	50	10.0	86	S	4	1.8	.....	2c	2s, fg	SW	SW	0	0	Fair	
Milwaukee, Wis.	.....	.....	29.99	761.7	36	2.2	80	W	8	3.6	.....	0	0	.....	.....	0	0	Clear	
Mobile, Ala.	.....	.....	30.37	771.4	50	10.0	100	S	4	1.8	.....	.....	Fog	.....	.....	0	0	Dense fog	
Montgomery, Ala.	.....	.....	30.40	772.1	52	11.1	82	Calm	0	0	.....	10ck	Sm'e	W	.....	0	0	Cloudy	
Morgantown, W. Va.	29.12	739.6	30.19	766.8	47	8.3	62	S	2	0.9	.....	10c	0	SW	.....	Inap.	Inap.	Cloudy	
Mt. Washington, N. H.	23.64	600.4	30.00	762.0	25	— 3.9	100	NW	36	16.1	.....	.....	Fog	.....	.....	0.03	0.8	Foggy	
Nashville, Tenn.	.....	.....	30.30	769.6	44	6.7	75	Calm	0	0	.....	0c,s	Fog	W,SW	.....	0	0	Fair	
New Haven, Conn.	.....	.....	30.13	765.3	38	3.3	90	S	5	2.2	.....	.....	Fog	.....	.....	0.05	1.3	Foggy	
New London, Conn.	.....	.....	30.15	765.8	37	2.8	90	S	1	0.4	.....	.....	Fog	.....	.....	0.05	1.3	Dense fog	
New Orleans, La.	.....	.....	30.32	770.1	67.(	14.2	87	SE	5	2.2	.....	8s	0	SW	.....	0	0	Cloudy	
Newport, R. I.	.....	.....	30.14	765.5	38	3.3	100	S	6	2.7	.....	.....	Fog	.....	.....	0.03	0.8	Dense fog	
New York, N. Y.	.....	.....	30.16	766.1	39	3.9	87	SW	8	3.6	.....	2ck	5ks	W	SW	0.06	1.5	Clearing	
Norfolk, Va.	.....	.....	30.30	769.6	48	8.9	77	SW	8	3.6	.....	0	Haz	.....	.....	0	0	Clear	
North Platte, Neb.	27.21	691.1	29.89	759.2	30	-- 1.1	89	W	10	4.5	.....	0	2s	.....	W	0	0	Clear	
Omaha, Neb.	28.96	735.6	30.07	763.8	36	2.2	80	W	1	0.4	.....	1l.c	5s	.....	.....	0	0	Fair	
Oswego, N. Y.	.....	.....	29.94	760.5	43	6.1	75	S	10	4.5	.....	8cs	2s	NW	.....	0.01	0.3	Cloudy	
Pembina, Dakota	.....	.....	30.05	763.3	0	—17.8	85	Calm	0	0	.....	0c	0	.....	.....	0	0	Fair	
Philadelphia, Pa.	.....	.....	30.18	766.6	39	3.9	86	W	10	4.5	.....	2ck	5s, f,	SW	.....	0	0	Cloudy	
Pike's Peak, Col.	17.67	448.8	29.98	761.5	9	—12.8	57	SW	12	5.4	.....	0	2s	.....	.....	0	0	Fair	
Pittsburgh, Pa.	.....	.....	30.10	764.5	48	8.9	70	SW	11	4.9	.....	0	0	.....	.....	Inap.	Inap.	Clear	
Port Huron, Mich.	.....	.....	29.87	758.7	38	3.3	81	S	12	5.4	.....	1l.c	2s	.....	.....	Inap.	Inap.	Clear	
Portland, Me.	.....	.....	30.03	762.7	39	3.9	81	S	4	1.8	.....	10a	Fog	W	.....	0.07	1.8	Cloudy	
Portland, Oregon	.....	.....	29.73	755.1	48	8.9	92	NE	2	0.9	.....	.....	10n	.....	.....	1.35	34.3	Light rain	
Punta Rassa, Fla.	.....	.....	30.36	771.1	60.(	15.6	84	NE	6	2.7	.....	0	0	.....	.....	0	0	Clear	
Rochester, N. Y.	.....	.....	29.90	759.4	44	6.7	67	SW	12	5.4	.....	8c	Haze	W	.....	Inap.	Inap.	Fair	
Salt Lake City, Utah	25.87	657.1	30.20	767.1	24	— 4.4	100	NW	10	4.5	.....	.....	Fog	.....	.....	0	0	Dense fog	
Sandy Hook, N. J.	.....	.....	30.12	765.0	39	3.9	81	W	2	0.9	.....	10k	0	W	.....	0.04	1.0	Cloudy	
San Diego, Cal.	.....	.....	30.16	766.1	56	13.3	100	Calm	0	0	.....	.....	10s	.....	N	0	0	Cloudy	
San Francisco, Cal.	.....	.....	30.12	765.0	60	15.6	91	S	12	5.4	.....	.....	10s	.....	S	0.36	9.1	Threatening	
Santa Fé, N. M.	23.34	592.8	29.88	758.9	29	— 1.7	46	N	9	4.0	.....	0c	0	W	.....	0	0	Fair	
Savannah, Ga.	.....	.....	30.41	772.4	51	10.6	93	SW	2	0.9	.....	1c	Fog	W	.....	0	0	Smoky	
Shreveport, La.	.....	.....	30.33	770.4	54	12.2	93	S	3	1.3	.....	.....	10s	.....	S	0	0	Cloudy	
Smithville, N. C.	.....	.....	30.37	771.4	51	10.6	93	N	2	0.9	.....	8c,s	0	W,SW	.....	0	0	Cloudy	
Springfield, Mass.	.....	.....	30.09	764.3	39.(	4.2	81	S	7	3.1	.....	.....	10ks	.....	SW	0	0	Cloudy	
St. Louis, Mo.	.....	.....	30.17	766.3	53	11.7	73	SW	8	3.6	.....	0	5s	.....	.....	0	0	Fair	
St. Marks, Fla.	.....	.....	30.39	771.9	47	8.3	92	NE	1	0.4	.....	5c	0	NW	.....	0	0	Fair	
St. Paul, Minn.	.....	.....	29.93	760.2	29	— 1.7	89	SW	3	1.3	.....	2c	2s	W	W	0	0	Fair	
St. Paul's Island, Alaska	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Thatcher's Island, Mass.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Toledo, Ohio	.....	.....	30.08	764.0	37	2.8	90	SW	12	5.4	.....	.....	10s	.....	W	0.06	1.5	Cloudy	
Tucson, Arizona	27.65	702.3	30.00	762.0	43	6.1	75	SW	14	6.3	.....	0	Haz	.....	.....	0	0	Hazy	
Tybee Island, Ga.	.....	.....	30.20	767.1	34	1.1	.....	S	.....	.....	.....	0	0	.....	.....	0	0	Clear	
Vicksburg, Miss.	.....	.....	30.40	772.1	46	7.8	85	W	4	1.8	.....	2ck	Sm'e	W	.....	0	0	Smoky	
Virginia City, M. T.	24.38	619.2	30.35	770.9	53	11.7	93	SE	10	4.5	.....	8cs	Sm'e	.....	.....	0	0	Fair	
Washington, D. C.	.....	.....	29.86	758.4	22	— 5.6	72	SE	4	1.8	.....	1c	0	W	.....	0	0	Clear	
Wilmington, N. C.	.....	.....	30.21	767 3	41	5.0	73	SW	4	1.8	.....	2c	5s	W	W	Inap.	Inap	Smoky	
	.....	.....	30.37	771.4	47	8.3	92	S	3	1.3	.....	5ck	Fog	W	.....	0	0	Fair	

UNITED STATES SERIES.—CONTINUED.

STATIONS.	BAROMETER. Corrected for instrum'tal error and temperature. Inches.	BAROMETER. Corrected for instrum'tal error and temperature. Millimeters.	BAROMETER. Reduced to sea-level. Inches.	BAROMETER. Reduced to sea-level. Millimeters.	TEMPERATURE OF THE AIR. Fahrenheit.	TEMPERATURE OF THE AIR. Centigrade.	RELATIVE HUMIDITY. Per cent.	WIND. Direction. From—	WIND. Velocity. Miles per hour.	WIND. Velocity. Meters per second.	WIND. Force. 0—10.	CLOUDS. Amount. Up'er 0—10.	CLOUDS. Amount. Low'r 0—10.	CLOUDS. Direction. Upper. From—	CLOUDS. Direction. Lower. From—	RAIN-FALL OR MELTED SNOW IN THE PAST 24 HOURS. Inches.	RAIN-FALL OR MELTED SNOW IN THE PAST 24 HOURS. Millimeters.	WEATHER.	OBSERVER.
Wood's Holl, Mass.	.....	.....	30.18	766.6	38	3.3	90	SW	8	3.6	.....	.....	10s	.....	SW	0.11	2.8	Cloudy	
Yankton, Dakota	28.78	731.0	30.11	764.8	35	1.7	80	SW	12	5.4	.....	5c	0	W	.....	0	0	Fair	
Yuma, Arizona	.....	.....	30.11	764.8	59	15.0	.....	N	.....	.....	.....	0	0	.....	.....	0	0	Clear	
SUB-SERIES.																			
Kingston, Jamaica, W. I.	.....	.....	30.25	768.3	73	22.8	90	N	4	1.8	.....	5c	5s	NE	.....	0.27	6.9	.....	James Gall.
Navassa, W. I.	.....	.....	.....	.....	76	24.4	.....	NE	.....	.....	3	.....	.....	.....	.....	0	0	.....	Dr. G. H. Davison.
Clifton, Ja., W. I.	27.24	691.9	30.06	763.5	63	17.2	94	NE	1.0	0.4	.....	.....	10k	.....	.....	2.60	66.0	Raining	C. Partridge.
Paramaribo, D. Guiana, S.A.	.....	.....	30.07	763.8	77	25.0	91	E	.....	.....	2	5k	0	E	.....	0	0	.....	C. J. Hering.
Batavia, Dutch Guiana, S.A.	30.06	763.4	.....	.....	77 9	25.5	.....	NE	.....	.....	.....	.....	.....	.....	.....	1.181	30.00	Rainy	Dr. H. Groot.
Medellin, Colombia, S. A.	25.24	641 1	.....	.....	65.5	18.6	82	Calm	.....	.....	0	7k	1s	.....	.....	0.06	1.5	Cloudy	Thomas Herran.
York Factory, B. A.	.....	.....	29.97	761.2	— 8.0	—22.2	79	W	5	2.2	.....	2c	2s	SW	.....	0	0	Fair	J. Fortescue. W. Wood
Honolulu, Oahu, H. I.	.....	.....	30.02	762.5	70	21.1	95	W	.....	.....	1	.....	.....	.....	.....	0	0	Clear	Daniel Smith.
Makawao, Maui, H. I.	.....	.....	29.96	761.0	66	18.9	78	Calm	.....	.....	0	0	0	.....	.....	0	0	.....	F. L. Clarke.

NOTE.—The originals give the amount of cloudiness by the scale 0 to 4, except York Factory, Makawao, Medellin and Paramaribo. The elevation of the barometer at Bismarck is 1,677 feet, or 511.1 meters; Cheyenne, 6,057.3 ft., or 1,846.9 m.; Clifton, about 2,892 ft., or 881.5 m.; Denver, 5,135 ft., or 1,565.2 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Florence, 1,550 (?) ft., or 472.5 (?) m.; Makawao, 2,205 ft., or 672.1 m.; Morgantown, 1,027.9 ft., or 313.3 m.; Medellin, 4,876 ft., or 1,486.2 m.; Mt. Washington, 6,285 ft., or 1,915.6 m.; North Platte, 2,846 ft., or 867.4 m.; Omaha, 1,054.6 ft., or 321.4 m.; Pike's Peak, 14,170.7 ft., or 4,318.1 m.; Salt Lake City, 4,362.2 ft., or 1,329.6 m.; Santa Fé, 6,862.2 (?) ft., or 2,091.6 (?) m.; Tucson, 2,513 (?) ft., or 772.1 (?) m.; Virginia City, 5,480 (?) ft., or 1,670.3 (?) m.; Yankton, 1,278 ft., or 389.5 m. The following constants are added in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Denver, 5.22 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 13.91 in.; Salt Lake City, 4.33 in.; Santa Fé, 6.54 in.; Tucson, 2.59 in.; Virginia City, 5.48 in. The elevation of Batavia is about 6 feet; the barometric readings need the addition of 0.2 mm. or 0.01 in. for reduction to sea-level.

UNITED STATES NAVAL SERIES.

By authority of the **SECRETARY OF THE NAVY.**

Furnished by the coöperation of the Navy Department, through Commodore Daniel Ammen, U. S. N., Chief of Bureau of Navigation.

STATIONS AND VESSELS.	True course toward—	Hourly rate in knots.	*Barometer as reported.		Temperature of the Air.		Relative Humidity.	Wind.				Clouds.				Rain-fall or melted snow in the past 24 hours.		State of Ocean.	Direction of swell from—	Weather.	Observer.
								Direction.	Velocity		Force.	Amount.		Direction.							
			Inches.	Millimeters.	Fahrenheit.	Centigrade.	Per cent.	From—	Miles per hour.	Meters per second.	0—10.	Up'er 0—10.	Low'r 0—10.	Up'er From—	Low'r From—	Inches.	Millimeters.				
Naval Academy, Annapolis, Md.			29.82	757.4	40	4.4		W			1		8			0	0			Cloudy	
Naval Hospital, Annapolis, Md.			30.21	767.3	41	5.0	74	SW			1		7		SW	0	0			Fair	
Navy Yard, Mare Island, Cal.			30.32	770.1	59.5	15.3	97	S			4		10			0.195	4.96			Rainy	
Navy Yard, Norfolk, Va.			30.44†	773.2†	45	7.2	100	SW			2		0							Blue sky	
Navy Yard, Pensacola, Fla.			30.40	772.1	56	13.3	94	NNE			1					0	0			Dense fog	
Navy Yard, Portsmouth, N.H.			30.07	763.8	36	2.2		WSW			2				E					Pleasant	
¶ Canonicus, New Orleans, La.			30.03†	762.7†	67	19.9	100	E			2		8		SW					Misty	
Colorado, New York, N. Y.			30.29	769.4	42	5.6		SW			1–3		7			0.062	1.57			Foggy	
Essex, Hampton Roads, Va.			30.28	769.1	48	8.9		S			1–2		1		S					Hazy	
Hartford, Hampton Roads, Va.			30.38	771.6	48	8.9		S			3		1			0	0			Pleasant	
Michigan, Erie, Pa.			30.00	762.0	43	6.1	83	SW			2		2		SW					Clear	
Monongahela, Baltimore, Md.			30.20	767.1	36	2.2		Var.			0–1		c							Hazy	
New Hampshire, Port Royal, S. C.			30.60	777.2	55	12.8		Calm			0		4		SE			Smooth		Foggy	
Omaha, Panama			30.08	764.0	73.5	23.1	88	WNW			3		1		S	0	0	Smooth		Pleasant	
Ossipee, New Orleans, La.			30.41	772.4	60	15.6		ESE			2		8		SW					Foggy	
Pensacola, Panama			30.08	764.0	74	23.3	86	NNW			1–2		1		N&W					Pleasant	
Plymouth, Pensacola, Fla.			30.40	772.1	58	14.4	88	NE			1		Fog					Smooth		Foggy	
¶ Rio Bravo, Matamoras, Mex.			30.04	763.0	60	15.6	94	SE			1		2		SE					‡D. clouds	
Santee, Annapolis, Md.			29.75	756.4	38	3.3	90	W			1		8							Cloudy	
St. Louis, League Island, Pa.			30.06	763.6	35	1.7		SW			2		8		SW	0	0			Cloudy	
Wabash, Boston, Mass.			30.14	765.5	41.0	5.0		SW			2–3		10		NE					Misty	
Wyoming, Washington, D.C.			30 29	769.4	40	4.4		WSW			1		5		NW					Hazy	

* It is not known that the barometer is corrected for temperature, instrumental error or elevation. † Aneroid Barometer. ‡ Detached clouds. ¶ Barometer corrected for instrumental error and reduced to sea-level.

UNITED STATES MARINE SERIES

REPORTED TO THE OFFICE OF THE CHIEF SIGNAL OFFICER OF THE ARMY.

NAMES OF VESSELS.	True course toward—	Hourly rate in knots.	Barometer reduced to sea-level.		Temperature of the Air.		Relative Humidity.	Wind.				Clouds.				State of Ocean.	Direction of swell from—	Weather.	OBSERVER.
								Direction.	Velocity.		Force.	Amount.		Direction.					
												Up'er	Low'r	Upper.	Lower.				
			Inches.	Millimeters.	Fahrenheit.	Centigrade.	Per cent.	From—	Miles per hour.	Meters per second.	0—10.	0—10.	0—10.	From—	From—				
PACIFIC MAIL S. S. CO. MARINE SERIES. Furnished by the coöperation of ————, President; Williams, Blanchard & Co., Agents.																			
S. S. City of Peking																			Lt. Z. L. Tanner, U.S.N
OCCIDENTAL AND ORIENTAL S. S. CO. MARINE SERIES. Furnished by the coöperation of George H. Bradbury, President; T. H. Goodman, Agent.																			
S. S. Belgic																			Capt. John Metcalf.
S. S. Gaelic																			Capt. W. H. Kidley.
S. S. Oceanic																			Capt. H. Parsell.
NORTH GERMAN LLOYD OF BREMEN MARINE SERIES. Furnished by the coöperation of A. Schumacher & Co., Agents.																			
S. S. Baltimore																			Capt. H. Andresser.
S. S. Berlin																			Capt. C. Pohle.
S. S. Braunschweig																			Capt. K. Undütsch.
S. S. Nürnberg																			Capt. A. Jaeger.
S. S. Ohio																			Capt. G. Meyer.
MARINE SERIES. (Miscellaneous.) Furnished by the coöperation of Captain James Jorgensen.																			
Schooner Addie Fuller, at Brunswick, Ga			30.28	769.1	54	12.2	87	NW	5	2.2		2cs	0					Fair	Capt. James Jorgensen

NOTE.—The schooner Addie Fuller gives the amount of cloudiness by the scale 0 to 4.

COLLATED AT THE OFFICE OF THE CHIEF SIGNAL OFFICER OF THE ARMY, WASHINGTON, D. C.

The records which appear in this Bulletin are copied from the regular exchanges of this office, made in each instance in compliance with an especial request and are published for the uses of the coöperating observers. The barometric readings in the first two columns are reduced to freezing and their respective standards; those in the second two also to mean sea-level. The "weather" is generally published as given.

When the distinction between the upper and lower strata of clouds is not reported, the *kinds* or *types*, viz: cirrus, cumulus, stratus, nimbus, scud, fracto-palio, haze, fog and smoke, as indicated, respectively, by the letters c, k, s, n, d, f, p, hz., fg, and sm'e, are generally published with the amount in the lower cloud column. The distinction between the upper and lower strata is carefully made in the United States Series and a portion of the Canadian Series, and the types are indicated by the above letters or their combinations in the proper column.

Albert J. Myer

Brig. Gen. (Bvt. Assg^d.) Chief Signal Officer, U. S. A.

BULLETIN

OF

INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON FEBRUARY 2, 1877.

7:35 A. M. WASHINGTON mean time.

6:7 A. M. MEXICO mean time.
7:7 A. M. SAN JOSE mean time.
0:6 P. M. LISBON mean time.
0:28 P. M. MADRID mean time.
0:43 P. M. GREENWICH mean time.
0:53 P. M. PARIS mean time.
1:1 P. M. BRUSSELS mean time.
1:4 P. M. UTRECHT mean time.
1:13 P. M. BERNE mean time.

1:26 P. M. CHRISTIANIA mean time.
1:33 P. M. COPENHAGEN mean time.
1:33 P. M. ROME mean time.
1:37 P. M. BERLIN mean time.
1:49 P. M. VIENNA mean time.
1:55 P. M. STOCKHOLM mean time.
2:18 P. M. ATHENS mean time.
2:39 P. M. CONSTANTINOPLE mean time.
2:44 P. M. ST. PETERSBURG mean time.

10:2 P. M. TOKEI mean time.

ALGERIAN SERIES.

Furnished by the coöperation of General d'Eudeville, Commandant Supérieur du Génie in Algeria.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Nemours	.....	.....	30.34	770.6	68.2	20.1	.....	SSE	.....	.....	2	.....	2	.....	.....	0	0	Clear	Michel.
Algiers	.....	.....	30.30	769.5	61.0	16.1	.....	SSW	.....	.....	1	.....	1	.....	.....	0	0	Clear	Biscarrat.
La Calle	.....	.....	30.12	765.0	55.4	13.0	.....	NW	.....	.....	6	.....	6	.....	.....	0.197	5.0	Fair	Fleury.
Tunis	.....	.....	30.16	766.1	46.4	8.0	.....	NW	.....	.....	5	.....	7	.....	.....	0.551	14.0	Cloudy	Jacques.
Sfax	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Saida	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Millot.
Tebessa	.....	.....	30.32	770.1	54.0	12.2	.....	NNW	.....	.....	2	.....	5	.....	.....	0	0	Fair	Bourgeois.
Geriville	.....	.....	30.13	765.3	51 8	11.0	.....	N	.....	.....	4	.....	6	.....	.....	0.591	15.0	Fair	Lemaillot.
Laghouat	.....	.....	30.22	767.5	44.6	7.0	.....	N	.....	.....	5	.....	5	.....	.....	0	0	Fair	Guyot.
Biskra	.....	.....	30.21	767.4	62 8	17.1	.....	N	.....	.....	5	.....	2	.....	.....	0	0	Clear	Kuntz.
.....	.....	.....	30.22	767.6	60.8	16.0	.....	NW	.....	.....	6	.....	4	.....	.....	0	0	Fair	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

NOTE.—In the originals the distinction between the amount of upper and lower clouds is apparently not made. The weather is published as given. The rain-fall is measured at 7 a. m., local time.

AUSTRIAN SERIES.

Furnished by the cooperation of Professor Ferdinand Osnaghi, Director of the Imperial and Royal Central Meteorological Institute at Vienna.

Agram	.....	.....	30.26	768.7	36.7	2.6	53	Calm	.....	.....	0	.....	3	.....	.....	0	0	.....	Prof. Ivan Stozir.
Cracow, I. R. Observatory	.....	.....	30.31	769 9	31.3	— 0.4	98	W	.....	.....	1	.....	10	.....	.....	0.075	1 9	.....	Dr. Wierzbiski.
Eperies	.....	.....	30.21	767.3	32.0	0.0	85	Calm	.....	.....	0	.....	10	.....	.....	0.029	0.74	.....	Julius Mikolik.
Gratz	.....	.....	30.28	769.1	36.1	2 3	60	S	.....	.....	2	.....	5	.....	.....	0	0	.....	Andreas Rospini.
Hermannstadt	28.97	735 9	30.15	765.9	29 3	— 1.5	84	S	.....	.....	1	.....	10	.....	.....	0.045	1.15	.....	Prof. Reissenberger
Kremsmünster	28.64	727.5	30.33	770.4	33.1	0.6	82	Calm	.....	.....	0	.....	2	.....	.....	0	0	.....	Prof. C. Wagner.
Lemberg	28.92	734.5	30.18	766.5	30.7	— 0.7	94	W	.....	.....	1	.....	10	.....	.....	0.028	0.7	.....	Dr. T. Stanecki.
Nyiregyhaza	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Habzsuda Daniel.
Pola	.....	.....	30.20	767.0	44 8	7.1	46	NNE	.....	.....	3	.....	18	.....	.....	0	0	.....	I.R.Hydrographic Of'ce.
Szegedin	.....	.....	30.18	766.6	32.7	0.4	83	N	.....	.....	2	.....	10	.....	.....	0	0	.....	Karl Stancel.
Trieste	.....	.....	30.24	768.2	44.6	7.0	66	ENE	.....	.....	1	.....	0	.....	.....	0	0	Clear	Prof. V. Farolfi.
Vienna	.....	.....	30.33	770 4	32.2	0.1	64	N	.....	.....	2	.....	0	.....	.....	0	0	.....	I. R. Central Met. Obs'y.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
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.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 7 p. m., local time. The elevation of Gratz is 343.5 meters, or 1,126.9 feet; Hermannstadt, 407.8 meters, or 1,337.9 feet; Kremsmünster, 383.0 meters, or 1,258.5 feet.

BELGIAN SERIES.

Furnished by the cooperation of J. C. Houzeau, Director of the Royal Observatory at Brussels.

Arlon	.....	.....	30.29	769.4	42.6	5.9	93	WSW	.....	.....	0	.....	10	.....	.....	0.035	0.9	.....	Royal Observatory.
Brussels	.....	.....	30.18	766.0	48.6	9.2	91	SW	.....	.....	1	.....	10	.....	.....	0.071	1.80	Sprinkling	
Furnes	.....	.....	30.10	764.5	49.6	9.8	92	SW	.....	.....	2	.....	4	.....	.....	0.043	1.1	.....	
Maeseyck	.....	.....	30.19	766.9	45.3	7.4	94	SSW	.....	.....	2	.....	0	.....	.....	0.079	2.0	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

NOTE.—In the originals, the weather is occasionally given in general notes.

BRITISH SERIES

Furnished by the coöperation of Robert H. Scott, Esq., Director of the Meteorological Office, London, Alexander Buchan, Secretary of the Scottish Meteorological Society, Edinburgh, and the respective Observers.

STATIONS.	Barometer. Corrected for instrumental error and temperature. Inches.	Barometer. Corrected for instrumental error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Upper. 0—10.	Clouds. Amount. Lower. 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Aberdeen			29.62	752.3	43.0	6.1		S	15	6.7			10					Raining	William Boswell.
Ardrossan			29.53	750.0	48	8.9		S			3		8					Overcast	William McNeil.
Armagh, Observatory			29.41	747.8	49.0	9.4		S	22	9.8			10					Raining	S. Call, for Dr. Robinson.
Bidston (Liverpool Obs.)			29.78	756.4	52.1	11.5		SSE	19	8.5			10					Raining	John Hartnup.
Birr Castle, (Parsonstown)			29.53	750.0	52.8	11.6		SSW			4		5					Showery	J. Dreyer.
Bradford			29.78	756.4	53.1	11.7		S			5		10			0.03	0.8	Overcast	J. McLandsborough.
Bridgetown, (Barbados)			30.09	763.5	80.6	26.7		NE			2		6					*D. clouds	Sergt. J. F. Halanen, A.
Cambridge, Observatory			30.09	762.0	51.0	10.6		S			2		10					Overcast—	H. Todd. [H. C.
Cardington			29.99	761.7	52.0	11.1		SW			3		10					Overcast	John McLaren.
Carlisle																			T. Bell, for J. Cartmell.
Chatham, School M. E.			30.07	763.8	51.6	10.6		Calm			0		9					Blue sky	Capt. Fellows, R. E.
Dartmoor	28.68	728.5	30.22	767.6	41.6	5.0		W			6		10					Rain & fog	R. E. Power.
Davos Platz, (Switzerland)	24.93	633.2			32.6	0.3	88	SE			1		10			0.197	5.01	Hazy	Francis Redford, M. A.
Donaghadee			29.49	749.0	51	10.6		S			5		5					*D. clouds	J. Mac Gowan.
Dover			30.11	764.8	48	8.9		WSW			2		10					Gloomy	J. Costello.
Eccles, (near Manchester)			29.79	756.7	52.5	11.4		SSE	9.0	4.0			10					Misty	Thomas Mackereth.
Falmouth, Observatory			29.98	761.5	52.7	11.5		SSW			6		10					Rain & fog	The Staff.
Fort Napier, (Natal)	27.50	698.5	29.74	755.4	82.0	27.8		E			2		2					*D. clouds	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.96	761.0	84.0	28.9		NE			1		2					*D. clouds	
Galway, Queen's College			29.56	750.8	49	9.4		W			6		6					Raining	Prof. A. H. Curtis.
Gibraltar, (Mediterranean)			30.29	769.4	64.6	18.1		NE			1		4					Hazy	Corpl. C. Aitken, A.H.C.
Glasgow, Observatory			29.54	750.3	48.4	9.1		S			1		10					Threatening	Lewis Stuart.
Great Yarmouth			30.02	762.5	48	8.9		S			3		8					Foggy	G. T. Watson.
Greenwich, Royal Obs'y			30.05	763.3	49.6	9.8		SSW			4		10					Overcast	The Staff, for G. B. Airy.
Guernsey			30.13	765.3	51	10.6		SSW			3		8					*D. clouds	Dr. S. E. Hoskins.
Helston			30.01	762.2	51	10.6		SW			4		10n			0.8	20.3	Raining	M. P. Moyle.
Holyhead			29.63	752.6	51	10.6		SSW			6		10					Drizzling	John Tilston.
Kew, Observatory			30.06	763.5	50.4	10.2		SSW	16	7.2			10					Misty	The Staff.
Kingstown			29.56	750.8	55	12.8		SW			4		8					Overcast	George Mitchell.
Leicester Museum			29.91	759.7	52.0	11.1		S			3		10					Overcast	Wm. J. Harrison, F.G.S.
Malta, (Mediterranean)			29.86	758.4	55.8	13.2		NE			3		10k					*D. clouds	Corp'l. P. Bravis, A.H.C.
Nairn			29.49	749.0	48	8.9		WSW			2		10					Overcast	W. D. Penny.
Nassau, (Bahamas)			30.24	768.1	70.2	21.2		NE			1		8					Overcast	Surg. Maj. Henry.
Nottingham, Observatory			29.90	759.4	52.3	11.3		SSW			4		10d		SW	0.06	1.6	Overcast	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			29.88	758.9	51.0	10.6		S			6		10					Misty	Rev. Stephen Whitty.
Oxford, Radcliffe Obs'y			29.97	761.2	53	11.7		S			2		10					Gloomy	J. Lucas.
Plymouth			30.02	762.5	51.6	10.9		SW			3		10					Drizzling	John Merrifield.
Roche's Point			29.73	755.1	52	11.7		WSW			6		10					Rain-squall	W. Kennedy.
Saint Ann's Head			29.81	757.2	51	10.6		SSW			6		10					Foggy	John C. Walker.
Saint Helier, (Jersey)			30.16	766.1	51.0	10.6		S			3		10					Overcast	A. P. Amy.
Sandwick Manse, (Orkneys)			29.52	749.8	42.9	6.1		SE	35	15.7			5					*D. clouds	Rev. C. Clouston, LL. D.
Scarborough																			F. Shaw.
Scutari Cemetery, (Turkey)			29.98	761.5	46.0	7.8		NE			2		7			Black	blank	*D. clouds	Sergt. W. H. Lyne.
Sheffield			29.83	757.7	51.7	10.9		SW			4		10			0.10	2.6	Overcast	W. F. Cooper.
Silloth Rectory			29.58	751.3	51.3	10.7	87	SW			6		10			0.08	2.1	Overcast	Rev. Francis Redford
Stonyhurst, Observatory			29.75	755.6	51.0	10.6		S			4		10					Raining	Rev. S. J. Perry.
Stornoway, Lews C., (Heor.)			29.33	745.0	44	6.7		SSE			6		8					Threatening	John Smith.
Stratfield Turgiss			30.07	763.8	50.7	10.4		SW			1		10					Drizzling	Rev. Charles H. Griffith.
Thurso			29.49	749.0	45	7.2		SSE			4		8					Overcast	John Trotter.
Truro, Royal Institution			29.99	761.7	54	12.2		W			7		10					Raining	W. Newcombe.
Valencia, Observatory			29.72	754.9	47.7	8.7		WSW	55	24.6			10					*D. clouds	The Staff.
SUB-SERIES.																			
Calf of Man, (Isle of Man)																			Henry Mercer.
Cape Good Hope, Obs'y			29.89	759.2	78.7	25.9	55	NW	13	5.8		0	1						The Staff, for E. J. Stone.
Hobart Town, (Tasmania)			30.24	768.1	63.0	17.2	82	S			1		8k			0.15	3.8	Cloudy	Francis Abbott, F.R.A.S.
Leith, Restalrig Park			29.58	751.3	50.4	10.2		SE			1		10ks			0.05	1.3	Cloudy	Andrew Gibb.
Mauritius, Observatory			29.80	756.9				WNW	8.3	3.7						0	0		C. Meldrum.
Melbourne, Observatory			30.36	771.1	57.6	14.2	53	SSE	15	6.7			9			0	0	Dull	R. L. J. Ellery.
Monach L't-house, (Hebrides)																			J. Youngclause.
North Unst, (Shetland Is.)			29.58	751.3	43	6.1		SE			6		10			Blank	Blank		Robert Burnet.

NOTE.—Generally, the originals do not give the relative humidity, rain-fall, or distinction between upper and lower clouds. The originals give the wind direction to 32 points and weather by the Beaufort notation. The originals give the barometer for Aberdeen, Cardington, Galway, Oxford, St. Helier, Sandwick, Scarborough, Stonyhurst, Leith, Monach and North Unst as read off and the amount of cloudiness for Stornoway by the scale 0 to 4. The wind-force is given by the scale 0 to 12 in the official series; 0 to 6 in the sub-series; except in lbs. per square foot for Greenwich and Hobart Town. The rain-fall is measured at Aberdeen at 10 a. m.; Bradford, 9 a. m.; Hobart Town, 7:30 a. m.; Nottingham, 6 p. m.; Mauritius, 9 a. m., local time. The elevation of Dartmoor is 1,400 feet, or 426.7 meters; Davos Platz, 5,205 feet, or 1,556.0? meters; Fort Napier, 2,200 feet, or 670.6 meters.
*Detached clouds.

By authority of the MINISTER OF FOREIGN AFFAIRS.

COSTA RICA SERIES.

Furnished by the coöperation of Senor Federico Maison, Director of the Central Office of Statistics and Meteorology.

STATIONS.	Barometer. Corrected for instrumental error and temperature. Inches.	Barometer. Corrected for instrumental error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Upper. 0—10.	Clouds. Amount. Lower. 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
San José																			

DANISH SERIES.

Furnished by the coöperation of Captain N. Hoffmeyer, Director of the Royal Danish Meteorological Institute at Copenhagen.

STATIONS.	Barometer. Corrected for instrumental error and temperature. Inches.	Barometer. Corrected for instrumental error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Upper. 0—10.	Clouds. Amount. Lower. 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Copenhagen			30.38	771.6	32.7	0.4	85	SE			2		8						
Fanöe			30.22	767.6	30.2	— 1.0	88	SSE			4		9						
Godthaab, (Greenland)			29.47	748.4	— 3.6	—19.8	93	ENE			6		8						
Tiykkisholm, (Iceland)			28.86	733.1	28.6	— 1.9	96	SE			4		10						
Shorshavn, (Faröe)			29.37	746.1	44.4	6.9	84	SSE			4		10						
Vestervig			30.22	767.5	28.0	— 2.2	92	SE			6		4						

NOTE.—The originals give the wind-force by the scale 0 to 6; occasionally, weather by Vienna symbols; no distinction between the amount of upper and lower clouds.

FRENCH SERIES.

Furnished by the co operation of His Excellency, U. J. Le Verrier, Director of the Paris Observatory, and the respective Observers.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters	Weather	Observer.
Alengon	.....	.....	30.27	768.9	46.4	8	86	W	.....	.....	1	.....	5ck	.....	W	0	0	Cloudy	Normal School.
Amiens	.....	.....	30.23	767.9	51.1	10.6	93	SE	.....	.....	2	.....	5	.....	SE	0.071	1.8	Cloudy	Normal School.
Avignon	.....	.....	30.22	767.5	54.7	12.6	54	N	.....	.....	2	.....	0	.....	.....	0	0	Very clear	Normal School.
Bar-sur-Seine	.....	.....	30.28	769.2	46.4	8	93	W	.....	.....	1	.....	10	.....	WSW	0.236	6.0	Covered	C. Saillard.
Beaumette, (near Angers)	.....	.....	30.24	768.1	48.7	9.3	89	SSW	4.0	1.8	.....	.....	.....	.....	SW	0.016	0.4	.....	Beaumette Observ'tory.
Beauvais	.....	.....	30.23	767.9	53.1	11.7	77	SW	.....	.....	2	.....	10	.....	WNW	0.020	0.50	Covered	Normal School.
Besançon	.....	.....	30.33	770.4	47.1	8.4	86	NE	.....	.....	2	.....	10	.....	.....	0.295	7.5	Covered	Normal School.
Bourg en Bresse	.....	.....	30.38	771.6	41.7	5.4	81	N	.....	.....	2	.....	10n	.....	S	0.322	8.2	Covered	Normal School.
Bourges	.....	.....	30.25	768.3	47.8	8.8	95	SW	.....	.....	2	.....	5	.....	SW	0.020	0.5	Cloudy	Normal School.
Brest	.....	.....	30.11	764.9	52.3	11.3	90	SW	.....	.....	4	.....	10	.....	SW	0.059	1.50	Misty	Naval Observatory.
Carcassonne	.....	.....	30.33	770.3	52.7	11.5	63	W	.....	.....	3	.....	10	.....	.....	0.047	1.2	Covered	Normal School.
Caen	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Chartres	.....	.....	30.17	766.4	51.1	10.6	74	NW	.....	.....	2	.....	8	.....	N	0	0	.....	Normal School.
Châlons-sur-Marne	.....	.....	30.27	768.8	48.9	9.4	81	SSE	.....	.....	2	.....	10n	.....	NNE	0.039	1.0	Covered	Normal School.
Clermont	.....	.....	30.29	769.3	47.8	8.8	71	N	.....	.....	1	.....	10	.....	.....	0	0	.....	Puy de Dome Obs'y.
Commercy	.....	.....	30.26	768 5	46.2	7.9	86	NW	.....	.....	2	.....	5kn	.....	NW	0.110	2.8	Cloudy	Normal School.
Commune de Gréasque*	.....	.....	30.23	767.8	52.3	11.3	56	NW	.....	.....	2	.....	5	.....	NW	0	0	.....	M. Kina.
Grenoble	.....	.....	30.28	769.0	42.8	6	87	ENE	.....	.....	1	.....	5kn	.....	SE	0.059	1.5	Cloudy	Normal School.
La Roche-sur-Yon	.....	.....	30.28	769.2	51.8	11.0	90	S	.....	.....	4	.....	5	.....	SE	0.039	1.0	Cloudy	Normal School.
Le Mans	.....	.....	30.28	769.1	47.1	8.4	92	SW	.....	.....	2	.....	8	.....	SW	0	0	Very cloudy	Normal School.
Lons-Le-Saulnier	.....	.....	30.32	770.0	45.1	7.3	88	NW	.....	.....	1	.....	5	.....	.....	0.067	1.70	Cloudy	Normal School.
Lorient	.....	.....	30.24	768.2	54.7	12.6	81	SSW	.....	.....	2	.....	5	.....	SW	0.059	1.5	Cloudy	Naval Observatory.
Mâcon	.....	.....	30.37	771.3	48.0	8.9	86	Calm	.....	.....	0	.....	5	.....	S	0.331	8.4	Cloudy	Normal School.
Metz	.....	.....	30.34	770.5	40.1	4.5	93	SW	.....	.....	3	.....	10	.....	.....	0.154	3.9	Covered	M. Schuster.
Mirecourt	.....	.....	30.29	767.8	43.3	6.3	97	SSW	.....	.....	2	.....	10	.....	NNE	0.28	7.	Covered	Normal School.
Nismes	.....	.....	30.24	768.2	57.2	14	58	N	.....	.....	4	.....	.....	.....	.....	0	0	.....	Normal School.
Orleans	.....	.....	30.24	768.1	50.7	10.4	90	W	.....	.....	1	.....	8	.....	NW	0	0	Very cloudy	Normal School.
Paris, Observatory	.....	.....	30.24	768.2	52.5	11.4	75	S	.....	.....	2	.....	9ck	.....	SW	0.004	0.10	Almost cov'd	National Observatory.
Parthenay	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Privas	.....	.....	30.28	769.0	48 9	9.4	.....	NW	.....	.....	1	.....	5	.....	NW	0	0	Cloudy	Normal School.
Rochefort, Observatory	.....	.....	30.31	769.9	53.6	12.0	86	SW	.....	.....	2	.....	10	.....	NE	0	0	Covered	Naval Observatory.
Rouen	.....	.....	30.16	766.1	53.2	11.8	79	W	.....	.....	2	.....	2	.....	W	0.047	1.2	Slightly cl'dy	Normal School.
Saint Lo	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Tarbes	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Cloudy	Normal School.
Villefranche	29.22	742.1	30.31	769.8	55.0	12.8	74	W	.....	.....	2	.....	5	.....	E	0	0	Very cloudy	Normal School.
Sun-Series.	.....	.....	30.34	770.6	48.2	9	83	N	.....	.....	1	.....	8	.....	.....	0.08	2.	.....	.....
Fort de France, Martinique	.....	.....	29.93	760.2	75.4	24.1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	L'Abbé Marchési.
Marseilles	.....	.....	30.17	766.4	55.9	13.3	80	NW	.....	.....	1	.....	5	.....	.....	0	0	Partly cl'dy	Marseilles Observatory.
Mont-Louis	25.04	636.0	30.35	771.0	50.0	10.0	16	WNW	7.4	3.33	.....	.....	2	.....	W	0	0	.....	—. Falguère.
Montsouris, Paris	.....	.....	30.34	768.0	52.5	11.4	78	SW	.....	.....	2	.....	10	.....	S	0.004	0.1	.....	Montsouris Observatory
Perpignan	.....	.....	30.25	768.4	56.7	13.7	54	NE	13.0	5.81	.....	.....	0	.....	.....	0	0	.....	Dr. Fines.
Pic du Midi, (Summit,) H. P.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. Baylac.
Pic du Midi, (Plantade,) H. P.	22.60	576.4	.....	.....	39.6	4.2	.....	N	.....	.....	2	.....	0	.....	.....	0	0	Clear	General de Nansouty.
Saint Maur, (near Paris)	.....	.....	30.24	768.2	51.8	11.0	81	S	.....	.....	1	.....	9	.....	.....	0.020	0.5	Covered	E. Renou.
Toulouse	.....	.....	30.43	772.8	50.2	10.1	69	NW	.....	.....	1	.....	10	.....	.....	0.075	1.9	.....	Toulouse Observatory.
Tours	.....	.....	30.27	768.9	50.4	10.2	82	SW	.....	.....	1	.....	7	.....	SW	0	0	.....	C. Marquet.
Versailles, (near Paris)	.....	.....	30.25	768.4	52.5	11.4	80	W	.....	.....	1	.....	8	.....	.....	0.063	1.60	Fair	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai)	.....	.....	30.26	768.7	38.5	3 6	88	N	6.0	2.67	.....	.....	10	.....	.....	0.252	6.4	Rainy	Marc Dechevrens, S. J.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Note.—Generally, the originals give the wind-force by the scale 0 to 7; no distinction between upper and lower clouds, and, in the official series, the amount by the scale 0 to 4 the rain-fall as measured at 7, 8 or 9 a. m., local time; at Clermont, 9 a. m. of the following day; the weather in general terms as published. The elevation of Clermont is 388 meters, or 1,272.9 feet; Commune de Gréasque, 322 meters, or 1,056.4 feet; Tarbes, 308 meters, or 1,010 feet; Mont-Louis, 1,586.40 meters, or 5,204.8 feet; Pic du Midi, (Summit,) 2,577 meters, or 9,439.1 feet; Pic du Midi, Plantade,) 2,366 meters, or 7,762.6 feet. In correcting the Mont-Louis barometric observations for altitude, the constant 135. millimeters has been added. *Bouches-du-Rhône

GERMAN SERIES.

Furnished by the coöperation of Professor Dr. G. Neumayer, Director of the German Naval Observatory, Hamburg.

Bamberg	.....	.....	30.28	769.0	38.8	3.8	80	W	.....	.....	3	.....	9	W	.....	0	0	.....	Prof. T. Hoh
Berlin	.....	.....	30.43	772.8	36.5	2.5	65	S	.....	.....	1	.....	8	.....	.....	0	0	.....	Prof. Arndt.
Breslau	.....	.....	30.35	771.0	30.9	— 0.6	95	WNW	.....	.....	3	.....	10	.....	.....	0.004	0.1	.....	Royal University Obs'y.
Carlsruhe	.....	.....	30.28	769.1	42.4	5.8	84	SSW	.....	.....	1	.....	10	.....	.....	0	0	.....	A. Senz.
Cassel	.....	.....	30.24	768.1	39.9	4.4	81	ESE	.....	.....	2	.....	10	E	.....	0.020	0.5	.....	Dr. H. Möhl.
Crefeld	.....	.....	30.21	767.4	43.3	6.3	87	SE	.....	.....	3	.....	10	.....	.....	0	0	Smoke-haze	Director Lose.
Emden	.....	.....	30.31	769.9	37.8	3.2	87	ESE	.....	.....	3	.....	0	.....	.....	0	0	.....	Prof. Prestel.
Frankfort on the Main	.....	.....	30.35	770.8	40.6	4.8	85	SE	.....	.....	1	.....	10	.....	.....	0.008	0.2	Foggy	Physical Society.
Friedrichshafen	28.84	732.6	30.34	770.5	39.7	4.3	84	ESE	.....	.....	2	.....	10	.....	.....	0	0	.....	M. Wilhelm.
Hamburg	.....	.....	30.35	770.8	32.0	0.0	78	SE	.....	.....	4	.....	10s	.....	.....	0	0	Clear	Captain F. Hegemann.
Kiel	.....	.....	30.31	769.9	32.0	0.0	79	SSE	.....	.....	2	.....	2	.....	.....	0	0	.....	Prof. G. Karsten.
Königsberg, (Prussia)	.....	.....	30.36	771.1	23.0	— 5.0	82	NE	.....	.....	2	.....	2	.....	.....	0.024	0.6	Snowing	Prof. E. Luther.
Köslin	.....	.....	30.41	772.5	34.9	1.6	.....	.....	.....	.....	.....	.....	10	.....	.....	0	0	.....	H. Müller.
Leipsic	.....	.....	30.41	772.3	30.6	— 0.8	85	ESE	.....	.....	1	.....	1	.....	.....	0	0	.....	Prof. Bruhns.
Memel	.....	.....	30.37	771.5	24.8	— 4.0	80	NNE	.....	.....	3	.....	8ck	ENE	.....	0.067	1.7	.....	Reinbrecht & Skalweit.
Münster	.....	.....	30.00	762.1	47.1	8.4	70	SW	.....	.....	1	.....	4	.....	.....	0	0	.....	Prof. E. Heis.
Neufahrwasser	.....	.....	30.36	771.2	31.6	— 0.2	81	N	.....	.....	3	.....	10	.....	.....	0.016	0.4	.....	A Lothe.
Posen	.....	.....	30.36	771.1	34.8	1.3	81	N	.....	.....	5	.....	10	.....	.....	0.031	0.8	.....	Dr. Magener.
Strassburg, (in Alsace)	.....	.....	30.32	770.0	41.2	5.1	94	SE	.....	.....	1	.....	10	.....	.....	0.012	0.3	.....	Dr. Schur.
Stuttgart	.....	.....	30.29	769.4	48.9	0.6	78	SW	.....	.....	1	.....	10	.....	.....	0.016	0.4	Raining	Prof. Schoder.
Thorn	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Dr. Hasenbalg.
Treves, (Trier)	.....	.....	30.21	767.4	41.5	5.3	88	SW	.....	.....	1	.....	10	.....	.....	0.067	1.7	Foggy	Prof. Flesch.
Weissenburg, (Bavaria)	28.75	730.2	30.32	770.2	36.5	2.5	85	Calm	.....	.....	0	.....	1	.....	.....	0	0	.....	Dr. von Bebber.
Wustrow, Naval School	.....	.....	30.45	773.4	32.2	0.1	91	SE	.....	.....	2	.....	8	.....	.....	0	0	.....	E. F. Schütz.
German Naval Series.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Note.—The elevation of Friedrichshafen is 413.4 meters, or 1,356.3 feet; Weissenburg, 431 meters, or 1,414.0 ft. In the originals the distinction between the amount of upper and lower clouds is not made. It is not always certain that the remarks in the weather column refer to the moment of observation.

GREEK SERIES.

Furnished by the coöperation of Professor Dr. J. F. Julius Schmidt, Director of the Royal Observatory at Athens.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Upper. 0—10.	Clouds. Amount. Lower. 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Athens			29.91	759.7	48.0	8.9		NE			Strong							Covered	

NOTE.—The originals give the barometer corrected, but not reduced to sea-level; occasionally the kind of clouds; the weather as published. They omit the humidity, wind-force, amount of cloudiness and rain-fall.

ITALIAN SERIES.

Furnished by the cooperation of His Excellency the Minister of Agriculture, Industry and Commerce, and the respective Observers.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Upper. 0—10.	Clouds. Amount. Lower. 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Udine			30.21	767.3	42.6	5.9	31	W	0.7	0.3			0			0	0		Prof. Giovanni Clodg i
Stelvio	22 13	562.1			19.4	— 7.0		ESE			2		6	SSW		0	0		Signora Ernesta Manfredi.
Valdobbia	22.17	563.1			23.0	— 5.0	79	W			1		1	NW		0	0		Ab. Dom. Mongini.
Padua			30.23	767.7	41.4	5.2	47	NW	0.7	0.3			0			0	0		Prof. Dott. Lor nzon'.
Vicenza			30.18	766.5	43.3	6.3	53	SE	3.8	1.7			0			0	0		Conte Alm. Da Schio.
Verona			30.23	767.9	44.6	7.0	61	E			1		0			0	0		Dott. B. Bertoncelli.
Bergamo	28 84	732.6	30.21	767.2	41.4	5.2	40	SSE			2		0			0	0		Prof Trionfini Carlo.
Domodossola			30.21	767.3	42.4	5.8	35	SW			6		1			0	0		Prof. Giuseppe Calza.
Milan			30.22	767.6	45.0	7.7	60	ENE			1		0			0	0		Ab. Gio. Capelli
Pavia			30.24	768.0	40.5	4.7	53	NE			4		0			0	0		Prof. Gio. Cantoni.
Moncalieri			30.25	768.4	41.4	5.2	54	SSE	3.1	1.4			1			0	0		Prof. P. F. Denza.
Mondovi	28.26	717.7	30.23	767.8	38.3	3.5	40	NW			4		0			0	0		Prof. D. C. Bruno.
Porto Maurizio			30.24	768.1	50.4	10.2	24	E			4		0			0	0		Prof. L. Vassallo.
Genoa			30.20	767.1	52.3	11.3	22	S	4.9	2.2			0			0	0		Prof. G. M. Garibaldi.
Piacenza			30.24	768.2	43.2	6.2	48	E	3.3	1.4			0			0	0		Dott. G. Manzi.
Parma			30.24	768.1	42.4	5.8	70	E			4		1			0	0		Prof. P. Pigorini.
Florence			30.22	767.6	46.9	8.3	43	NE			6		0			0	0		Cav. F. Meucci.
Leghorn			30.19	766.9	47.8	8.8	23	NE	9.5	4.4			0			0	0		Prof. P. Monte.
Siena	28.94	735.1	30.19	766 8	42.8	6.0	28	ENE	8.	3.6			0			0	0		Prof. L. Toscani.
Urbino	28.61	726.7	30.23	767.9	37.6	3.1	66	NE			4		4			0	0		Prof. P. Serpieri.
Pesaro			30.24	768.0	42.6	5.9	77	NW	19.7	8.6			1	E		0	0		Prof. Luigi Guidi.
Ancona			30.19	766.9	46.4	8.0	60	N			2		3	NW		0	0		Prof. F. De— Bosis.
Grosseto			30.19	766.7	48.7	9.3	36	NNE			6		2	NW		0	0		Avv. P. Ponticelli.
Rome			30.07	763.8	50.7	10.4	54	N	17.4	7.8			0			0	0		Prof's. P. Secchi & L. Respighi.
Naples, O. U			30.02	762.6	50.5	10.3	38	NE			6		1	N		0	0		Prof. L. Palmieri.
Lecce			29.97	761.3	49.3	9.6	60	N	21.7	9.7			8			0.047	1.2	Raining	Prof. C. De—Giorgi.
Cosenza			30.01	762.2	48.6	9.2	84	ENE	15.4	6.9			6			0.039	1.0	Raining	Prof. F. D. Conti.
Cagliari			30.10	764.4	53.1	11.7	25	NW			2		0			0	0		Prof. A. Pacinotti.
Riposto, (Sicily)			29.84	757.8	56.5	13.6	59	N			4		10	S		0.110	2.8	Raining	Prof. F. Cafiero.
Palermo			29.91	759.7	52.5	11.4	76	W	5.6	2.5			9			0.213	5.4	Raining	Prof. G. Cacciatore.
Caltanissetta	27.91	708.8	29.92	760.0	46.0	7.8	64	NNW			6		6	SE		0	0		Prof. A. Pagani.
Siracusa			29.91	759.7	55.9	13.3	72	ENE			6		10	NE		0.197	5.0		Prof. V. Giuliano.
SUB-SERIES.																			
Naples, S. R.			30.06	763.4	47.1	8.4	44	ENE	6.3	2.8			2	E		0	0		Prof. F. Brioschi.

NOTE.—The originals give the wind-force by the scale 0 to 4, or the velocity in kilometers per hour; generally no distinction between upper and lower clouds, occasionally the weather by the Vienna symbols. The elevation of Stelvio is 2,543.0 meters, or 8,342.9 feet; Valdobbia, 2,548.0 meters or 8,359.3 feet; Bergamo, 379.6 meters, or 1,245.3 feet; Mondovi, 556 meters, or 1,824.2 feet; Siena, 348.5 meters, or 1,143.3 feet; Urbino, 451 meters, or 1,479.7 feet; Caltanissetta, 570.3 meters, or 1,871.0 feet.

JAPANESE SERIES.

Furnished by the coöperation of the Imperial University of Tokei, Japan.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Upper. 0—10.	Clouds. Amount. Lower. 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Tokei			30.05	763.3	34	1.1		NW	8	3.6			0			0	0		Prof. P. V. Veeder.

NOTE.—The originals give the amount of cloudiness by the scale 0 to 4 without distinguishing between upper and lower clouds. The rain-fall is measured at 7 a. m., cal time.

MEXICAN SERIES.

By authority of the SECRETARY OF PUBLIC WORKS.

Furnished by the coöperation of Senor Mariano Barcena, Director of the Central Meteorological Observatory in the City of Mexico.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Upper. 0—10.	Clouds. Amount. Lower. 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Mexico																			Mariano Barcena.
																			Vicente Reyes.
																			Miguel Perez.
																			(Engineers in charge.)

NOTE.—The elevation of Mexico is 2,290 meters, or 7,512.9 feet. The rain-fall is measured at 6 a. m., local time.

NETHERLANDS' SERIES.

Furnished by the cooperation of Professor Buys Ballot, Director of the Royal Meteorological Institute of the Netherlands at Utrecht.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Upper. 0—10.	Clouds. Amount. Lower. 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Flushing			30.17	766.4	46.8	8.2		SSW			2					0.016	0.4		
Groningen			30.14	765.5	38.8	3.8										0	0		
Heider			30.12	765.0	43.7	6.5		SSE			2					0.118	3.0		
Utrecht			30.14	765.5	43.0	6.1	98	SSE			2					0.068	0.2	Hazy	

NOTE.—The originals give the wind-pressure in kilograms per square meter; for Utrecht, they give the weather as published, from which the amount of cloudiness is taken by the scale 0 to 4, without distinguishing between upper and lower clouds. It is assumed that the barometer readings have been reduced to sea-level.

NORWEGIAN SERIES.

Furnished by the coöperation of Professor H. Mohn, Director of the Royal Norwegian Meteorological Institute at Christiania.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Upper. 0—10.	Clouds. Amount. Lower. 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Bergen			29.98	761.6	37.0	2.8	86	S	23.7	10.5			10			0.748	19.0	Raining	
Brönö			29.98	761.6	37.0	2.8	69	SSE	17.9	8			8			0	0		
Christiania			30.34	770.5	24.8	— 4.0	89	SE	0	0			10			0	0		
Tromsö			29.80	757.0	30.6	— 0.8	83	ESE	17.9	8			5			0	0		

NOTE.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols. The cloudiness and weather at Bergen refer to 2h., p. m., local time, instead of 1h., 4 min.

PORTUGUESE SERIES.

Furnished by the coöperation of J. C. de Brito Capello, Director of the Meteorological Observatory of the Infante Don Luiz at Lisbon.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Angra, (Azores)	.....	.....	30.12	772.6	56.7	13.7	80	ENE	18.1	8.1	.....	.....	6	.....	.....	0.827	21.0	.....	Dr. J. A. Sampaio.
Campo Major	.....	.....	30.35	770.9	61.7	16.5	67	ESE	1.8	0.8	.....	.....	7	SW	.....	0	0	.....	Dr. A. M. R. dos Santos.
Funchal, (Madeira)	.....	.....	30.40	772.1	64.4	18.0	57	SW	6.3	2.8	.....	.....	0	.....	.....	0	0	.....	Capt. D. A. de Cunha.
Lisbon	.....	.....	30.41	772.5	48.2	9.0	100	NNE	4.9	2.2	.....	.....	10	.....	.....	0	0	Light fog.....	The Observatory.
Ponta Delgada, (Azores)	.....	.....	30.39	771.9	59.0	15.0	93	NE	6.9	3.1	.....	.....	10	.....	.....	0.386	9.8	Light rain...	

Note.—The originals give the wind-velocity in kilometers per hour; occasionally, the weather by the Vienna symbols; the amount of cloudiness without distinguishing between upper and lower clouds; the barometer corrected but not reduced to sea-level. The rain-fall at Libson is measured at noon, instead of 0 h. 6 m., p. m.

RUSSIAN SERIES.

Furnished by the cooperation of Professor H. Wild, Director of the Imperial Central Physical Observatory of Russia, at St. Petersburg.

Warsaw	.....	.....	30.27	768.9	26.8	— 2.9	91	NNW	11	5	.....	.....	10	.....	.....	.....	.....	.....	Astronomical Obs.
Wilna	.....	.....	30.28	769.1	23.7	— 4.6	72	N	2	1	.....	.....	10	.....	.....	.....	.....	.....	Astronomical Obs.
Dorpat	.....	.....	30.39	772.0	22.6	— 5.2	89	N	4	2	.....	.....	10	.....	.....	.....	.....	.....	Physical Cabinet.
St. Petersburg	.....	.....	30.35	771.0	17.6	— 8.0	100	WNW	2	1	.....	.....	10	.....	.....	.....	.....	Light fog.....	Central Physical Obs.
Kuopio	.....	.....	30.36	771.1	19.9	— 6.7	97	N	7	3	.....	.....	10	.....	.....	.....	.....	.....	Ch. Forsten.
Kieff	.....	.....	30.23	767.9	28.0	— 2.2	100	S	4	2	.....	.....	10	.....	.....	.....	.....	.....	Physical Cabinet.
Nikolaiev	.....	.....	30.33	770.4	19.9	— 6.7	81	E	22	10	.....	.....	8	.....	.....	.....	.....	.....	Kurdakof
Kertch	.....	.....	30.30	769.6	25.0	— 3.9	98	NE	9	4	.....	.....	10	.....	.....	.....	.....	.....	Lagorio.
Moscow	.....	.....	30.39	772.0	13.3	—10.4	74	S	7	3	.....	.....	6	.....	.....	.....	.....	.....	Meteorological Obs.
Lugan	.....	.....	30.26	768.5	15.8	— 9.0	78	N	2	1	.....	.....	1	.....	.....	.....	.....	.....	Meteorological Obs.
Archangel	.....	.....	30.26	768.6	12.9	—10.6	100	NNE	7	3	.....	.....	10	.....	.....	.....	.....	.....	Ogorodnikof.
Tiflis	28.69	728.7	30.13	765.3	49.1	9.5	48	NW	13	6	.....	.....	2	.....	.....	.....	.....	.....	Physical Observatory.
Astrakhan	.....	.....	30.29	769.3	21.8	— 4.0	84	SE	2	1	.....	.....	10	.....	.....	lank	lank	.....	Sebastianof.
Kasan	.....	.....	30.33	770.4	8.2	—13.2	92	S	11	5	.....	.....	10	.....	.....	.....	.....	Snowing.....	Physical Cabinet.
Orenburg	.....	.....	29.51	749.5	27.1	— 2.7	89	SE	18	8	.....	.....	10	.....	.....	.....	.....	.....	Tschernischet.
Ekaterinburg	29.40	746.7	30.43	773.0	13.8	—10.1	51	WSW	4	2	.....	.....	10	.....	.....	.....	.....	.....	Meteorogical Obs.
Nukuss	.....	.....	30.16	766.0	21.2	— 6.0	90	NE	9	4	.....	.....	9	.....	.....	.....	.....	.....	
Kusaly	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Bobrof.
Tashkend	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Michelson.
Barnaul	.....	.....	30.34	770.5	— 2.7	—19.3	81	SW	16	7	.....	.....	10	.....	.....	.....	.....	Snowing.....	Meteorological Obs.
Yeniseisk	.....	.....	30.11	764.7	— 5.8	—21.0	80	ESE	7	3	.....	.....	0	.....	.....	.....	.....	.....	Marks.
Irkutsk	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Usolzef.
Peking, (China)	.....	.....	30.29	769.4	30 7	— 0.7	77	SE	7	3	.....	.....	9	.....	.....	.....	.....	.....	Physical Observatory.
Nertchinsk	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Meteorological Obs.
Vladivostock	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Nikolaievsk, on the Amoor	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols; they omit the rain-fall. The elevation of Tiflis is 409 meters, or 1,341.8 feet; Ekaterinburg, 306.4? m., or 1,005.2? ft.; Tashkend, 494.2? m., or 1,621.3? ft.; Irkutsk, 392 m., or 1,286 ft.; Nertchinsk, 592.0? m., or 1,942.2? ft.

SPANISH SERIES.

Furnished by the coöperation of Antonio Aguilar, Director of the Royal Observatory at Madrid, and of Don Cecilio Pujazon, Captain R. N. Director of the Naval Observatory at San Fernando.

Madrid	.....	.....	30.36	771.2	55.6	13.1	61	S	2.2	1.00	.....	2	0	NW	.....	0	0	Light clouds	Royal Observatory.
San Fernando	.....	.....	30.32	770.2	64.9	18.3	52	N	6.5	2.9	.....	0	7	....	N	.....	.....	.....	Naval Observatory.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

Note.—The originals give the weather in general terms, as published; rain-fall for San Fernando from preceding to following midnight; wind-velocity for Madrid in kilometers per hour.

SWEDISH SERIES.

Furnished by the coöperation of Professor R. Rubenson, Director of the Royal Swedish Meteorological Institute, at Stockholm, and of Dr. H. H. Hildebrandsson, Chief of the Meteorological Division of the Upsala Observatory.

Haparanda	.....	.....	30.43	772.9	5.0	—15.0	91	Calm	.....	.....	0	.....	4	.....	.....	0	0	.....	
Umea	.....	.....	30.39	771.9	3.6	—15.8	90	Calm	.....	.....	0	.....	9	.....	.....	0	0	.....	
Hernosand	.....	.....	30.31	769.9	22.3	— 5.4	90	S	.....	.....	2	.....	9	.....	.....	0	0	.....	
Stockholm	.....	.....	30.01	762.2	20.5	— 6.4	95	SSW	.....	.....	2	.....	10	.....	.....	0	0	.....	
Wisby	.....	.....	30.39	772.0	30.2	— 1.0	88	NE	.....	.....	4	.....	10	.....	.....	0.004	0.1	.....	
Sub-Series.																			
Upsala	.....	.....	30.41	772.5	19.8	— 6.8	95	SSW	4.5	2.0	.....	.....	10	....	....	0	0	.....	Dr. Hildebrandsson.

Note.—The originals give the wind-force by the scale 0 to 6, and Upsala also velocity in meters per second; occasionally, the weather by the Vienna symbols, or in general terms; no distinction between the amount of upper and lower clouds. The rain-fall is measured at 8 a. m., local time.

SWISS SERIES.

Furnished by the coöperation of Professor R. Wolf, Director of the Observatory at Zurich, and of Professor E. Plantamour, Director of the Observatory at Geneva.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Geneva	28.84	732.4	30.30	769.6	41.7	5.4	81	NNW			1		2			0.012	0.3	Clear	The Observatory.
Zurich	28.63	727.2	30.33	770.4	36.1	2.3	97	SE			1		10			0.079	2.0	Foggy	The Observatory.

Note.—For Geneva the corresponding departures from the normal values are: Barometer, +5.4 mm; Thermometer, +2.9 cent.; Relative Humidity, +6 per cent.

Note.—The rain-fall is measured at Zurich at 7 a. m. on the following day. The originals give the barometer corrected but not reduced to sea-level; the wind-force by the scale 0 to 4 for Zurich; the amount of cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The elevation of Geneva is 408 meters, or 1,339 feet, and that of Zurich 470 meters, or 1,542 feet.

TURKISH SERIES.

Furnished by the coöperation of A. Coumbary, Effendi, Director of the Central Observatory at Constantinople, and of Professor C. V. A. Van Dyck, Superintendent of the Lee Observatory at Beirut.

Constantinople																			
Fao, (Persian Gulf)																			
Salonica																			
Valona																			
Varna																			
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y			30.05	763.3	64.9	18.3	70	W			1		8c			1.30	33.0	Hazy	Prof. C. V. A. Van Dyck

Note.—The originals give the wind-force by the scale 0 to 7, (except Beirut, by the scale 0 to 12, and Constantinople velocity in meters per second;) the weather in general terms as published; no distinction between upper and lower clouds, and, except Constantinople and Beirut, the amount by the scale 0 to 4. It is assumed that the barometer is reduced to sea-level.

CANADIAN SERIES.

Furnished by the coöperation of Professor G. T. Kingston, Director of the Magnetic Observatory at Toronto, and Superintendent of the Meteorological Office of the Dominion of Canada, and the respective Observers. Those marked with a star (*) are also telegraphed daily to the office of the Chief Signal Officer, U. S. Army.

Bathurst, N. B			30.06	763.5	19.6	— 6.9	73	SE	7.5	3.4			10						Hon. J. Ferguson.
Brockville, Ontario			30.05	763.3	33	0.6		Calm	0	0			10s		SW	0	0	Cloudy	W. R. Bigg.
*Chatham, N. B			30.01	762.2	21	— 6.1	94	N	7	3.1			10ks		N	0.08	2.0	Cloudy	G. A. Blair.
Charlottetown, P. E. Island			29.92	760.0	29	— 1.7	98	N	8	3.6			10n			0.100	2.54	Light snow	H. J. Cundall, C. E.
Cornwall, Ontario			30.04	763.0	33.9	1.1	95	W			1		10s			0	0	Unsettled	James Smith, M. A.
Dalhousie, N. B			30.13	765.3	17.6	— 8.0	92	SE			1					0.50	12.7	Snowing	H. A. Johnson.
Esquimault, B. C			29.65	753.1	49.3	9.6	85	SE					10n			0.10	2.5	Cloudy	W. H. Bevis.
*Father Point, Quebec			30.06	763.5	18	— 7.8	94	E	18	8.0			10n			0.05	1.3	Light snow	J. McWilliams.
Fredericton, N. B			30.04	763.0	23.5	— 4.7	83	N	1	0.4			10s			0.120	3.05	Cloudy	Prof. Harrison.
*Fort Garry, Manitoba			30.22	767.6	— 1	—18.3	97	Calm	0	0		Haze	Haze			0	0	Foggy	James Stewart.
Goderich, Ontario			30.05	763.3	33.8	1.0	76	SW			1	10k	0			0	0	Unsettled	H. J. Strang, M. A.
Granton, Ontario	28.88	733.5	30.03	762.7	29.1	— 1.6		E			1		10n			0	0	Cloudy	James Grant.
*Halifax, N. S			29.87	758.7	34	1.1	98	NW	3	1.3			Fog			0.280	7.11	Foggy	F. Allison, M. A.
Hamilton, Ontario			30.10	764.5	30.2	— 1.0	91	SW			1		10n			0	0	Misty	G. Dickson.
Heart's Content, N. F			30.21	767.3	21	— 6.1	100	SE			1		10			0	0	Overcast	E. Weedon.
*Kingston, Ontario			30.09	764.3	32	0.0	98	Calm	0	0		5c	2ks			0	0	Cloudy	S. Woods, M. A.
*Montreal, Quebec			30.01	762.2	35	1.7	92	SW	14	6.3			10n		SW	0.09	2.3	Light rain	C. H. McLeod, C. E.
*Ottawa, Ontario			30.02	762.5	37	2.8	66	SW	6	2.7			8ks		W	0.04	1.0	Cloudy	J. B. Haney.
*Parry Sound, Ontario			30.06	763.5	33	0.6	95	Calm	0	0		8k	2ks	SW	SW	0.06	1.5	Cloudy	Rev. R. Mosley.
Port Dover, Ontario			30.04	763.0	30	— 1.1	89	N	3	1.3		Haze	Haze			0	0	Cloudy	H. Morgan.
Port Hastings, N. S			29.97	761.2	31.6	— 0.2		Calm	0	0						0	0	Fine	Peter Grant.
Port Stanley, Ontario			30.06	763.5	28	— 2.2	92	E	2	0.9			Fog			0	0	Foggy	M. Payne.
*Quebec, Quebec			30.03	762.7	24	— 4.4	87	NE	25	11.2			10n		NE	0.21	5.3	Cloudy	Capt. Ashe, R. N.
*Rockliffe, Ontario			30.02	762.5	34	1.1	94	E	2	0.9			10s		NW	0	0	Cloudy	
St. John, N. B			30.04	763.0	24.0	— 4.4	87	N	4	1.8		10ks?	0			0.07	1.8	Overcast	G. Murdoch, C.E.
*Saugeen, Ontario			30.01	762.2	33	0.6	70	Calm	0	0			10n			0.01	0.3	Cloudy	K. Stewart.
Stayner, Ontario			30.07	763.8	33	0.6	96	W	4	1.8			10n		W	0	0	Cloudy	R. J. Cole.
Stratford, Ontario	28.71	729.2	30.06	763.5	26.4	— 3.1	91	E	1	0.4			10s			0	0	Cloudy	C. J. MacGregor, M. A.
*Sydney, C. B			29.90	759.4	31	— 0.6	98	NW	3	1.3			10n			0.41	10.4	Cloudy	T. C. Hill.
*Toronto, Ontario			30.07	763.8	34	1.1	91	SW	2	0.9			10n			0	0	Cloudy	Magnetic Observatory.
Woodstock, Ontario			30.06	763.5	25.5	— 3.6	100	Calm	0	0			10s			0	0	Cloudy	J. Montgomery.
Sub-Series.																			
St. Johns, Newfoundland			30.33	770.4	24.0	— 4.4	94	E					10n			0.01	0.3	Snowing	John Delany

Note.—The originals for Brockville, Charlottetown, Port Dover, Port Stanley, Stayner, St. Johns, N. F. and those telegraphed, give the amount of cloudiness by the scale 0 to 4. The elevation of Granton is 1,015 feet, or 309.4 m.; Stratford, 1,182 feet, or 360.3 m

UNITED STATES SERIES.

Furnished by the cooperation of Bvt. Brig. Gen. Albert J. Myer, Chief Signal Officer, U. S. Army.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain fall or melted snow in the past 24 hours. Inches.	Rain fall or melted snow in the past 24 hours. Millimeters.	Weather	Observer.
Albany, N. Y.	.....	.....	30.03	762.7	38	3.3	80	Calm	0	0	.....	.....	10s	.....	.....	0	0	Cloudy	
Alpena, Mich.	.....	.....	30.04	763.0	34	1.1	90	Calm	0	0	.....	.....	10s	.....	.....	0	0	Cloudy	
Atlantic City, N. J.	.....	.....	30.07	763 8	42	5.6	83	Calm	0	0	.....	8cs	Haze	W	.....	0	0	Cloudy	
Augusta, Ga.	.....	.....	30.28	769.1	49	9.4	93	Calm	0	0	.....	5cs	5s	W	.....	0	0	Cloudy	
Baltimore, Md.	.....	.....	30.07	763.8	46	7.8	85	Calm	0	0	.....	Haze	2s	.....	.....	0	0	Smoky	
Barnegat, N. J.	.....	.....	30.07	763.8	38	3.3	90	S	6	2.7	.....	10cs	Haze	W	.....	0	0	Cloudy	
Bismarck, Dakota	28.36	720 3	30.14	765.5	14	—10.0	81	NE	2	0.9	.....	0	0	.....	.....	0	0	Clear	
Boston, Mass.	.....	.....	30.04	763.0	37	2.8	80	W	3	1.3	.....	7cs	Haze	W	.....	Inap.	Inap.	Fair	
Breckenridge, Minn.	.....	.....	30.09	764.3	7	—13.9	77	W	6	2.7	.....	0	0	.....	.....	0	0	Clear	
Buffalo, N. Y.	.....	.....	30.03	762.7	32.5	0.3	90	E	2	0.9	.....	.....	Fog	.....	.....	0	0	Foggy	
Burlington, Vt.	.....	.....	30.04	763.0	30	3.9	71	Calm	0	0	.....	.....	10s	.....	.....	0.01	0.3	Cloudy	
Cairo, Ill.	.....	.....	30.11	764.8	55	12.8	87	S	3	1.3	.....	.....	10s	.....	W	0.05	1.3	Cloudy	
Cape Hatteras, N. C.	.....	.....	30.16	766.1	51	10.6	86	W	6	2.7	.....	Haze	Sm'e	.....	.....	0	0	Smoky	
Cape Henry, Va.	.....	.....	30.14	765.5	52	11.1	73	SW	16	7.2	.....	2c	Haze	.....	.....	0	0	Fair	
Cape Lookout, N. C.	.....	.....	30.25	768.3	52	11.1	93	SW	4	1.8	.....	0	Fog	.....	.....	0	0	Foggy	
Cape May, N. J.	.....	.....	30.07	763.8	47	8.3	77	NW	3	1.3	.....	0	5s	.....	W	0	0	Fair	
Charleston, S. C.	.....	.....	30.31	769.9	62	11.1	79	SW	4	1.8	.....	2c	Haze	W	.....	0	0	Hazy	
Cheyenne, Wyoming	24.15	613.4	30.09	764.3	33	0.6	79	W	16	7.2	.....	5ck	2s	.....	.....	0	0	Fair	
Chicago, Ill.	.....	.....	30.01	762.2	39	3.9	73	W	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Cincinnati, Ohio	.....	.....	29.98	761.5	53	11.7	93	NW	4	1.8	.....	.....	10n	.....	NW	0.19	4.8	Light rain	
Cleveland, Ohio	.....	.....	30.00	762.0	44	6.7	92	S	7	3.1	.....	.....	10n	.....	.....	0.03	0.8	Light rain	
Corsicana, Tex.	.....	.....	30.06	763.5	60	15.6	94	SE	6	2.7	.....	.....	10s	.....	.....	0 79	20.1	Cloudy	
Davenport, Iowa	.....	.....	30.12	765.0	36	2.2	80	NW	5	2.2	.....	0	0	.....	.....	0	0	Clear	
Denison, Tex.	.....	.....	30.13	765.3	56	13.3	93	N	4	1.8	.....	.....	Fog	.....	.....	3.26	82.8	Foggy	
Denver, Col.	24.92	633.0	30.14	765.5	32	0.0	60	S	5	2.2	.....	.....	8s	.....	.....	0	0	Cloudy	
Detroit, Mich.	.....	.....	29.96	761.0	37	2.8	80	Calm	0	0	.....	.....	10s	.....	.....	0	0	Cloudy	
Dodge City, Kan.	27.58	700.5	29.98	761.5	31	— 0.6	89	NW	4	1.8	.....	2c	0	SW	.....	0	0	Clear	
Dubuque, Iowa	.....	.....	30.10	764.5	32	0.0	79	NW	1	0.4	.....	.....	10s	.....	.....	0	0	Cloudy	
Duluth, Minn.	.....	.....	30.05	763.3	36	2.2	86	Calm	0	0	.....	.....	10s	.....	.....	0	0	Cloudy	
Eastport, Me.	.....	.....	29.96	761.0	25	— 3.9	88	N	13	5.8	.....	.....	10s	.....	.....	0.10	2.5	Cloudy	
Erie, Pa.	.....	.....	29.99	761.7	42	5.6	83	S	6	2.7	.....	.....	10s	.....	.....	0	0	Cloudy	
Escanaba, Mich.	.....	.....	30.03	762.7	33	0.6	79	NE	2	0.9	.....	.....	10s	.....	.....	0.01	0.3	Cloudy	
Fort Gibson, Indian Ter.	.....	.....	30.10	764.5	54	12.2	93	S	1	0.4	.....	.....	Fog	.....	.....	0.36	9.1	Foggy	
Ft. St. Michael, Alaska	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Fort Sill, Indian Ter.	28.95	735.3	30.08	764.0	48	8.9	64	NE	6	2 7	.....	8cs	0	.....	.....	1.20	30.5	Cloudy	
Fort Sully, Dakota	28.44	722.4	30.19	766.8	27	-- 2.8	88	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Florence, Arizona	28.52	724.4	30.04	763.0	56	13.3	.....	SW	.....	.....	.....	0	0	.....	.....	0	0	Clear	
Galveston, Tex.	.....	.....	30.14	765.5	61	16.1	100	SE	8	3.6	.....	.....	Fog	.....	.....	0.05	1.3	Foggy	
Grand Haven, Mich.	.....	.....	30.00	762.0	26	— 3.3	94	S	1	0.4	.....	.....	Fog	.....	.....	0	0	Foggy	
Indianapolis, Ind.	.....	.....	30.02	762.5	51	10.6	93	SW	1	0.4	.....	.....	10n	.....	.....	1.13	28.7	Light rain	
Indianola, Tex.	.....	.....	30.12	765.0	64	17.8	100	SE	6	2.7	.....	.....	10s, fg	.....	.....	0	0	Cloudy	
Jacksonville, Fla.	.....	.....	30.32	770.1	49	9.4	86	Calm	0	0	.....	.....	Fog	.....	.....	0	0	Foggy	
Keokuk, Iowa	.....	.....	30.10	764.5	36	2.2	90	NW	4	1.8	.....	0	5s	.....	NW	0	0	Fair	
Key West, Fla.	.....	.....	30.22	767.6	68	20.0	90	N	8	3.6	.....	.....	10ks	.....	.....	0.10	3.8	Cloudy	
Kittyhawk, N. C.	.....	.....	30.20	767.1	47	8.3	85	SW	11	4.9	.....	0	Haze	.....	.....	0	0	Clear	
Knoxville, Tenn.	.....	.....	30.22	767.6	44	6.7	84	SE	2	0.9	.....	8cs	Sm'e	W	.....	0	0	Cloudy	
La Crosse, Wis.	.....	.....	30.08	764.0	31	— 0.6	79	NW	3	1.3	.....	.....	10s	.....	.....	0	0	Cloudy	
Leavenworth, Kan.	.....	.....	30.20	767.1	33	0.6	95	S	1	0.4	.....	0	Fog	.....	.....	0	0	Clear	
Louisville, Ky.	.....	.....	30.06	763.5	55	12.8	87	SW	4	1.8	.....	.....	10n	.....	.....	0.05	1.3	Light rain	
Lynchburg, Va.	.....	.....	30.14	765.5	42	5.6	79	Calm	0	0	.....	10ck	Sm'e	W	.....	0	0	Cloudy	
Malone, N. Y.	.....	.....	30.00	762.0	39	3.9	90	SW	5	2.2	.....	.....	10s	.....	SW	0.02	0.5	Cloudy	
Marquette, Mich.	.....	.....	30.01	762.2	36	2.2	70	N	2	0.9	.....	.....	10s	.....	.....	0.05	1.3	Cloudy	
Memphis, Tenn.	.....	.....	30.18	766.6	56	13.3	100	SW	4	1.8	.....	.....	10n	.....	SW	0.30	7.6	Light rain	
Milwaukee, Wis.	.....	.....	30.04	763.0	31	— 0.6	90	W	5	2.2	.....	0	2s	.....	.....	0	0	Clear	
Mobile, Ala.	.....	.....	30.26	768.6	52	11.1	100	S	1	0.4	.....	.....	Fog	.....	.....	0	0	Dense fog	
Montgomery, Ala.	.....	.....	30.29	769.4	48.5	9.2	89	Calm	0	0	.....	10ck	Haz	.....	.....	0	0	Cloudy	
Morgantown, W. Va.	28.97	735.8	30.02	762.5	52	11.1	78	S	2	0.9	.....	.....	10s	.....	S	Inap.	Inap.	Threatening	
Mt. Washington, N. H.	23.60	599.4	29.96	761.0	18	-- 7.8	100	NW	13	5.8	.....	.....	Fog	.....	.....	0.04	1.0	Foggy	
Nashville, Tenn.	.....	.....	30.12	765.0	55	12.8	87	Calm	0	0	.....	.....	10n	.....	W	0.07	1.8	Light rain	
New Haven, Conn.	.....	.....	30.10	764.5	41	5.0	73	N	5	2.2	.....	.....	10s, f,	.....	.....	0	0	Cloudy	
New London, Conn.	.....	.....	30.08	764.0	37	2.8	80	Calm	0	0	.....	8s	Fog	NW	.....	0	0	Cloudy	
New Orleans, La.	.....	.....	30.21	767.3	67	18.9	97	SE	3	1.3	.....	.....	10s	.....	SW	0	0	Cloudy	
Newport, R. I.	.....	.....	30.06	763.5	37	2.8	80	SW	4	1.8	.....	.....	10s	.....	SW	0	0	Threatening	
New York, N. Y.	.....	.....	30.08	764.0	45	7.2	67	Calm	0	0	.....	.....	10s, f,	.....	.....	0	0	Cloudy	
Norfolk, Va.	.....	.....	30.16	766.1	47	8.3	77	SW	4	1.8	.....	Haze	Fog	.....	.....	0	0	Fair	
North Platte, Neb.	27.21	691.1	29.91	759.7	27	— 2.8	88	W	4	1.8	.....	0	5ks	.....	W	0	0	Fair	
Omaha, Neb.	29.04	737.6	30.17	766.3	34	1.1	80	W	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Oswego, N. Y.	.....	.....	30.08	764.0	40	4.4	73	Calm	0	0	.....	.....	10s	.....	.....	0	0	Cloudy	
Pembina, Dakota	.....	.....	30.17	766.3	- 2	—18.9	84	S	1	0.4	.....	0	0	.....	.....	0	0	Clear	
Philadelphia, Pa.	.....	.....	30.17	766.8	43	6.1	83	W	5	2.2	.....	5c	2s, fg	W	.....	0	0	Cloudy	
Pike's Peak, Col.	17.74	450.6	29.95	760.7	6	—13.3	66	NW	34	15.2	.....	0	8s	.....	.....	0	0	Fair	
Pittsburgh, Pa.	.....	.....	29.98	761.5	45	7.2	92	Calm	0	0	.....	.....	10n	.....	.....	0.21	5.3	Light rain	
Port Huron, Mich.	.....	.....	29.98	761.5	32	0.0	89	Calm	0	0	.....	.....	Fog	.....	.....	0	0	Foggy	
Portland, Me.	.....	.....	29.98	761.5	36	2.2	80	W	4	1.8	.....	2c	Haze	W	.....	0	0	Fair	
Portland, Oregon	.....	.....	29.80	756.9	51	10.6	86	S	1	0.4	.....	.....	10n	.....	.....	0.20	5.1	Light rain	
Punta Rassa, Fla.	.....	.....	30.26	768.6	61.5	16.4	88	NE	8	3.6	.....	8cs	0	SW	.....	0	0	Fair	
Rochester, N. Y.	.....	.....	30.05	763.3	36	2.2	80	SW	4	1.8	.....	.....	10s	.....	W	0	0	Cloudy	
Salt Lake City, Utah	25.94	658.9	30.27	768.8	25	— 3.9	100	W	2	0.9	.....	.....	Fog	.....	.....	0	0	Dense fog	
Sandy Hook, N. J.	.....	.....	30.05	763.3	42	5.6	83	N	1	0.4	.....	10c	Haze	W	.....	0	0	Cloudy	
San Diego, Cal.	.....	.....	30.17	766.3	50	10.0	100	NE	2	0.9	.....	0	2s	.....	N	0	0	Clear	
San Francisco, Cal.	.....	.....	30.18	766.6	57	13.9	90	N	4	1.8	.....	.....	10s	.....	.....	0	0	Cloudy	
Santa Fé, N. M.	23.40	594.4	29.94	760.5	28	— 2.2	67	E	3	1.3	.....	0	0	.....	.....	0	0	Clear	
Savannah, Ga.	.....	.....	30.30	769.6	50	10.0	86	Calm	0	0	.....	2ck	Sm'e	W	.....	0	0	Smoky	
Shreveport, La.	.....	.....	30.20	767.1	60	15.6	100	S	3	1.3	.....	.....	10n	.....	.....	0.05	1.3	Light rain	
Smithville, N. C.	.....	.....	30.26	768.6	50	10.0	93	SW	4	1.8	.....	.....	10s, fg	.....	.....	0	0	Cloudy	
Springfield, Mass.	.....	.....	30.07	763.8	42.5	5.8	62	NW	1	0.4	.....	.....	10s	.....	NW	0	0	Cloudy	
St. Louis, Mo.	.....	.....	30.12	765.0	45	7.2	84	NW	4	1.8	.....	.....	10s	.....	.....	0.42	10.7	Cloudy	
St. Marks, Fla.	.....	.....	30.23	769.1	44	6.7	92	W	1	0.4	.....	0	2s	.....	.....	0	0	Clear	
St. Paul, Minn.	.....	.....	30.07	763 8	26	— 3.3	88	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
St. Paul's Island, Alaska	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Thatcher's Island, Mass.	.....	.....	30.02	762.5	38	3.3	71	W	12	5.4	.....	8c,cs	0	NW	.....	0	0	Fair	
Toledo, Ohio	.....	.....	29.97	761.2	45	7.2	76	SW	5	2.2	.....	.....	10s	.....	SW	0	0	Cloudy	
Tucson, Arizona	27.70	703.6	30.25	768.3	37	2.8	.....	SW	.....	.....	.....	0	0	.....	.....	0	0	Clear	
Tybee Island, Ga.	.....	.....	30.29	769.4	47	8.3	83	Calm	0	0	.....	2cs	Sm'e	.....	.....	0	0	Smoky	
Vicksburg, Miss.	.....	.....	30.24	768.1	59	15.0	97	Calm	0	0	.....	8ck	Sm'e	S	SE	Inap.	Inap.	Cloudy	
Virginia City, M. T.	24.44	620.8	29.92	760.0	25	— 3.9	75	NE	1	0.4	.....	1c	0	.....	.....	0.04	1.0	Clear	
Washington, D. C.	.....	.....	30.08	764.0	45	7.2	85	S	1	0.4	.....	2cs	5s	W	W	0	0	Smoky	
Wilmington, N. C.	.....	.....	30.25	768.3	49	9.4	93	SW	6	2.7	.....	5cs	Haze	.....	.....	0	0	Fair	

UNITED STATES SERIES.—Continued.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Upper. 0—10.	Clouds. Amount. Low'r. 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Wood's Holl, Mass.	.....	.....	30.06	763.5	37	2.8	71	SW	6	2.7	.....	0	8s	.....	SW	0	0	Cloudy.....	
Yankton, Dakota	28.89	733 8	30.25	768.3	28	— 2.2	77	W	2	0.9	.....	0	0	.....	.....	0	0	Clear	
Yuma, Arizona	.....	.....	30.03	762.7	54	12.2	.....	SW	.....	.....	.....	2cs	0	W	.....	0	0	Fair	
Sub-Series.																			
Kingston, Jamaica, W. I.	.....	.....	30.25	768.3	73	22.8	81	Calm	0	0	.....	2c	2s	.....	.....	0.2	0.05	.....	James Gall.
Navassa, W. I.	.....	.....	.....	.....	76	24.4	.....	NE	.....	.....	3	.....	.....	.....	.....	0	0	.....	Dr. G. H. Davison.
Clifton, Ja., W. I.	27.24	691.9	30.06	763.5	64	17.8	78	NNW	2.0	0.9	.....	5c	7k	N	.....	0.60	15.2	Fine.....	C. Partridge.
Paramaribo, D. Guiana, S.A	.....	.....	30.03	762.7	78	25.6	86	E	.....	.....	3	5k	7ks	E	.....	0.090	2.29	½ cloudy....	C. J. Hering.
Batavia, Dutch Guiana, S.A.	30.08	640.0	.....	.....	77.0	25.0	.....	NE	.....	.....	.....	.....	.....	.....	.....	0	0	Cloudy.....	Dr. H. Groot.
Medellin, Colombia, S. A.	25.27	641.8	.....	.....	61.5	16.4	84	Calm	.....	.....	0	9cs,k	1s	.....	.....	0.34	8.6	Cloudy.....	Thomas Herran.
York Factory, B. A.	.....	.....	29.99	761.7	2.0	—16.7	86	SW	32	14.3	.....	4ck	1s	S	.....	0	0	.....	J. Fortescue, W. Wood
Honolulu, Oahu, H. I.	.....	.....	30.04	763.0	69	20.6	95	Calm	.....	.....	0	.....	.....	.....	.....	0	0	Clear	Daniel Smith.
Makawao, Maui, H. I.	.....	.....	30.00	762.0	62	16.7	88	Calm	.....	.....	0	0	10n	.....	.....	0.60	15.2	.....	F. L. Clarke.

Note.—The originals give the amount of cloudiness by the scale 0 to 4, except York Factory, Makawao, Medellin and Paramaribo. The elevation of the barometer at Bismarck is 1,677 feet, or 511.1 meters; Cheyenne, 6,067.3 ft., or 1,846.2 m.; Clifton, about 6,892 ft., or 881.5 m.; Denver, 5,135 ft., or 1,565.2 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Florence, 1,550 (?) ft., or 472.5 (?) m.; Makawao, 2,205 ft., or 672.1 m.; Morgantown, 1,027.9 ft., or 313.3 m.; Medellin, 4,876 ft., or 1,486.2 m.; Mt. Washington, 6,285 ft., or 1,915.6 m.; North Platte, 2,846 ft., or 867.4 m.; Omaha, 1,054.6 ft., or 321.4 m.; Pike's Peak, 14,160.7 ft., or 4,313.1 m.; Salt Lake City, 4,362.2 ft., or 1,329.6 m.; Santa Fé, 6,862.2 (?) ft., or 2,091.6 (?) m.; Tucson, 2,513 (?) ft., or 770.1 (?) m.; Virginia City, 5,480 (?) ft., or 1,670.3 (?) m.; Yankton, 1,278 ft., or 389.5 m. The following constants are added in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Denver, 5.22 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fé, 6.54 in.; Tucson, 2.59 in.; Virginia City, 5.48 in. The elevation of Batavia is about 6 feet; the barometric readings need the addition of 0.2 mm. or 0.01 in. for reduction to sea-level.

UNITED STATES NAVAL SERIES.

By authority of the **SECRETARY OF THE NAVY.**

Furnished by the coöperation of the Navy Department, through Commodore Daniel Ammen, U. S. N., Chief of Bureau of Navigation.

STATIONS AND VESSELS.	True course toward—	Hourly rate in knots.	*Barometer as reported.		Temperature of the Air.		Relative Humidity.	Wind.				Clouds.				Rain-fall or melted snow in the past 24 hours.		State of Ocean.	Direction of swell from—	Weather.	OBSERVER.
								Direction.	Velocity		Force.	Amount.		Direction.							
			Inches.	Millimeters.	Fahrenheit.	Centigrade.	Per cent.	From—	Miles per hour.	Meters per second.	0—10.	Up'er 0—10.	Low'r 0—10.	Up'er From—	Low'r From—	Inches.	Millimeters.				
Naval Academy, Annapolis, Md.			29.73	755.1	46	7.8		W			0-1		10			0.14	3.6			Cloudy	
Naval Hospital, Annapolis, Md.			30.12	765.0	48	8.9	78	Calm			0		8		W	0	0			Threatening	
Navy Yard, Mare Island, Cal.			30.26	768.6	57	13.9	100	SE			1		8			0	0			Pleasant	
Navy Yard, Norfolk, Va.			30.28	769.1†	46	7.8	100	Calm			0		4s							‡D. clouds	
Navy Yard, Pensacola, Fla.			30.32	770.1	58	14.4	94	NE			1					0	0			Dense fog	
Navy Yard, Portsmouth, N.H.			29.95	760.7	34	1.1		WNW			1				S&E					Fine	
¶ Canonicus, New Orleans, La.			29.92	760.0†	56	13.3	100	SSE			1		8		W					Misty	
Colorado, New York, N. Y.			30.12	765.0	42	5.6		Calm			0		9			0	0			Foggy	
Essex, Hampton Roads, Va.			30.16	766.1	67	19.4		SW			3		1		ESE					Hazy	
Hartford, Norfolk Va.			30.34	770.6	48	8.9		SSW			2		4		SW	0	0			Pleasant	
Michigan, Erie, Pa.			30.02	762.5	36	2.2	80	ESE			1		10							Cloudy	
Monongahela, Baltimore, Md.			30.08	764.0	43	6.1		Calm			0		..c,k		S&E					Foggy	
New Hampshire, Port Royal, S. C.			30.50	774.7	55	12.8		Calm			0		8		SE			Smooth		‡D. clouds	
Omaha, Panama			30.07	763.8	76	24.4	91	NNW			1		1			0	0	Smooth		Pleasant	
Ossipee, New Orleans, La.			30.29	769.4	56	13.3		SE			2									Foggy	
Pensacola, Panama			30.07	763.8	77	25.0	86	NNW			1		1							‡D. clouds	
Plymouth, Pensacola, Fla.			30.29	769.4	61	16.1	82	NE			2		Fog					Smooth		Foggy	
¶ Rio Bravo, Matamoras, Mex.			29.96	761.0	61	16.1	94	Calm			0		0							Foggy	
Santee, Annapolis, Md.			29.68	753.9†	43	6.1	83	W			0-1		10							Overcast	
St. Louis, League Island, Pa.			29.92	760.0	37	2.8		NW			1		9		N	0	0			Cloudy	
Vandalia, Constantinopl, Turkey.			30.05	763.3	47	8.3	92	NE			3		7		SW					‡D. clouds	
Wabash, Boston, Mass.			30.04	763.0	40	4.4		WNW					6		SE					Hazy	
Wyoming, Washington, D. C.			30.36	771.1†	40	4.4		Calm			0		6		WNW					Hazy	

* It is not known that the barometer is corrected for temperature, instrumental error or elevation. † Aneroid Barometer. ‡ Detached clouds. ¶ Barometer corrected for instrumental error and reduced to sea-level.

UNITED STATES MARINE SERIES.

REPORTED TO THE OFFICE OF THE CHIEF SIGNAL OFFICER OF THE ARMY.

NAMES OF VESSELS.	True course toward—	Hourly rate in knots.	Barometer reduced to sea-level.		Temperature of the Air.		Relative Humidity.	Wind.				Clouds.				State of Ocean.	Direction of swell from—	Weather.	OBSERVER.
								Direction.	Velocity.		Force.	Amount.		Direction.					
												Up'er	Low'r	Upper.	Lower.				
			Inches.	Millimeters.	Fahrenheit.	Centigrade.	Per cent.	From—	Miles per hour.	Meters per second.	0—10.	0—10.	0—10.	From—	From—				
PACIFIC MAIL S. S. CO. MARINE SERIES.																			
Furnished by the coöperation of ————, President; Williams, Blanchard & Co., Agents.																			
S. S. City of Peking																			Lt. Z. L. Tanner, U.S.N
OCCIDENTAL AND ORIENTAL S. S. CO. MARINE SERIES.																			
Furnished by the coöperation of George H. Bradbury, President; T. H. Goodman, Agent.																			
S. S. Belgic																			Capt. John Metcalf.
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S. S. Oceanic																			Capt. H. Parsell.
NORTH GERMAN LLOYD OF BREMEN MARINE SERIES.																			
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S. S. Berlin																			Capt. C. Pohle.
S. S. Braunschweig																			Capt. K. Undütsch.
S. S. Nürnberg																			Capt. A. Jaeger.
S. S. Ohio																			Capt. G. Meyer.
MARINE SERIES. (Miscellaneous.)																			
Furnished by the coöperation of Captain James Jorgensen.																			
Schooner Addie Fuller, at Brunswick, Ga			30.25	768.3	60	15.6	76	Calm	0	0		5c	5k					Hazy	Capt. James Jorgensen

NOTE.—The schooner Addie Fuller gives the amount of cloudiness by the scale 0 to 4.

COLLATED AT THE OFFICE OF THE CHIEF SIGNAL OFFICER OF THE ARMY, WASHINGTON, D. C.

The records which appear in this Bulletin are copied from the regular exchanges of this office, made in each instance in compliance with an especial request and are published for the uses of the coöperating observers. The barometric readings in the first two columns are reduced to freezing and their respective standards; those in the second two also to mean sea-level. The "weather" is generally published as given.

When the distinction between the upper and lower strata of clouds is not reported, the *kinds* or *types*, viz: cirrus, cumulus, stratus, nimbus, scud, fracto, pallio, haze, fog and smoke, as indicated, respectively, by the letters c, k, s, n, d, f, p, hz., fg. and sm'e, are generally published with the amount in the lower-cloud column. The distinction between the upper and lower strata is carefully made in the United States Series and a portion of the Canadian Series, and the types are indicated by the above letters or their combinations in the proper column.

Albert J. Myer

Brig. Gen. (Bvt. Asst'g.) Chief Signal Officer, U. S. A.

BULLETIN

OF

INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON FEBRUARY 3, 1877.

7:35 A. M. WASHINGTON mean time.

6:7 A. M. MEXICO mean time.
7:7 A. M. SAN JOSE mean time.
0:6 P. M. LISBON mean time.
0:28 P. M. MADRID mean time.
0:43 P. M. GREENWICH mean time.
0:53 P. M. PARIS mean time.
1:1 P. M. BRUSSELS mean time.
1:4 P. M. UTRECHT mean time.
1:13 P. M. BERNE mean time.

10:2 P. M. TOKEI mean time.

1:26 P. M. CHRISTIANIA mean time.
1:33 P. M. COPENHAGEN mean time.
1:33 P. M. ROME mean time.
1:37 P. M. BERLIN mean time.
1:49 P. M. VIENNA mean time.
1:55 P. M. STOCKHOLM mean time.
2:18 P. M. ATHENS mean time.
2:39 P. M. CONSTANTINOPLE mean time.
2:44 P. M. ST. PETERSBURG mean time.

ALGERIAN SERIES.

Furnished by the coöperation of General d'Eudeville, Commandant Supérieur du Génie in Algeria.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Nemours			30.38	771.6	66.2	19.0		S			2		2			0	0	Clear	Michel.
Algiers			30.35	770.8	61.7	16.5		NW			1		3			0	0	Fair	Biscarrat.
La Calle			30.22	767.5	75.2	24.0		N			3		3			0.118	3.0	Fair	Fleury.
Tunis			30.30	769.5	50.2	10.1		NW			4		2			0	0	Clear	Jacques.
Sfax																			
Saida			30.34	770.6	60.8	16.0		WNW			1		1			0	0	Clear	Millot.
Tebessa			30.24	768.1	41.0	5.0		W			4		2			0.118	3.0	Clear	Bourgeois.
Geriville			30.25	768.4	45.0	7.2		N			3		1			0	0	Clear	Lemaillot.
Laghouat			30.27	768.9	62.8	17.1		N			3		1			0	0	Clear	Guyot.
Biskra			30.36	771.2	68.0	20.0		NW			3		5			0	0	Fair	Kuntz.

NOTE.—In the originals the distinction between the amount of upper and lower clouds is apparently not made. The weather is published as given. The rain-fall is measured at 7 a. m., local time.

AUSTRIAN SERIES.

Furnished by the cooperation of Professor Ferdinand Osnaghi, Director of the Imperial and Royal Central Meteorological Institute at Vienna.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Agram			30.32	770.0	39.2	4.0	52	NE			1		7			0	0		Prof. Ivan Stoxir.
Cracow, I. R. Observatory			30.35	771.0	30.6	— 0.8	94	NE			1		3			0.035	0.9		Dr. Wierzbiski.
Eperies			30.30	769.6	31.5	— 0.3	72	N			2		10			0	0		Julius Mikolik.
Gratz	29.04	737.5	30.36	771.1	32.9	0.5	76	SW			3		0			0	0		Andreas Rospini.
Hermannstadt	28.72	729.4	30.23	767.7	30.9	— 0.6	85	S			1		6			0	0		Prof. Reissenberger
Kremsmünster	28.92	734.6	30.35	770.9	28.0	— 2.2	79	Calm			0		10			0.296	7.5		Prof. C. Wagner.
Lemberg			30.30	769.6	25.9	— 3.4	93	NE			1		10			0	0		Dr. T. Stanecki.
Nyiregyhaza																			Habzsuda Daniel.
Pola			30.30	769.6	41.7	5.4	56	Calm			0		1s			0	0		I.R.Hydrographic Office.
Szegedin			30.29	769.3	34.2	1.2	78	NE			2		3			0	0		Karl Stancel.
Trieste			30.35	770.8	42.8	6.0	63	Calm			0		0			0	0		Prof. V. Farolfi.
Vienna			30.30	771.1	34.0	1.1	65	NE			1		0			0	0		I. R. Central Met. Obs'y.

NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 7 p. m., local time. The elevation of Gratz is 343.5 meters, or 1,126.9 feet; Hermannstadt, 407.8 meters, or 1,337.9 feet; Kremsmünster, 383.6 meters, or 1,258.5 feet.

BELGIAN SERIES.

Furnished by the coöperation of J. C. Houzeau, Director of the Royal Observatory at Brussels.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Arlon			30.35	770.9	44.4	6.9	74	NW			2		2			0.008	0.2		
Brussels			30.30	769.7	45.9	7.7	75	SW			2	2c,ck	0	W	W	0.071	1.80		Royal Observatory.
Furnes			30.24	768.1	47.7	8.7	74	SW			4		2			0.035	0.9		
Maeseyck			30.29	769.4	46.9	8.3	69	SW			2		0			0.079	2.0		

NOTE.—In the originals, the weather is occasionally given in general notes.

BRITISH SERIES

Furnished by the coöperation of Robert H. Scott, Esq., Director of the Meteorological Office, London, Alexander Buchan, Secretary of the Scottish Meteorological Society, Edinburgh, and the respective Observers.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Aberdeen			29.58	751.3	40.0	4.4		SW	25	11.2			4			0.160	4.06	Blue sky	William Boswell.
Ardrossan			29.71	754.6	41	5.0		WNW			5		8					Overcast	William McNeil.
Armagh, Observatory			29.84	757.9	39.8	4.3		SW	17	7.6			5					Squally	S. Call, for Dr. Robinson.
Bidston (iverpool Obs.)			29.91	759.7	48.1	8.9		SW	40	17.9			2					Blue sky	John Hartnup.
Birr Castle, (Parsonstown)			29.93	760.2	43.0	6.1		WSW			2–3		7					Showery	J. Dreyer.
Bradford			29.91	759.7	43.7	6.5		W			5		7			0.14	3.6	*D. clouds	J. McLandsborough.
Bridgetown, (Barbados)			30.08	764.0	82.0	27.8		NE			3		5					*D. clouds	Sergt. J. F. Halanen, A.
Cambridge, Observatory			30.16	766.1	47.5	8.6		SSW			2		3					*D. clouds	H. Todd. [H.C.
Cardington			30.17	766.3	46.6	8.1		SW			3		1					Blue sky	John McLaren.
Carlisle																			T. Bell, for J. Cartmell.
Chatham, School M. E.			30.22	767.6	47.2	8.4		W			1		5					Blue sky	Capt. Fellows, R. E.
Dartmoor	28.70	729.0	30.25	768.3	42.4	5.8		SW			4		10					Showery	R. E. Power.
Davos Platz, (Switzerland)	25.02	635.5			30.2	1.0	83	E			1		10			0	0	Overcast	Francis Redford, M. A.
Donaghadee			29.78	756.4	41	5.0		WSW			5		5					*D. clouds	J. Mac Gowan.
Dover			30.20	767.1	47	8.3		WSW			2		5					½ clouded	J. Costello.
Eccles, (near Manchester)			29.94	760.5	46.2	7.9		SSW	5.8	2.6			10					Misty	Thomas Mackereth.
Falmouth, Observatory			30.23	767.8	49.1	9.5		SW			6		9					Overcast	The Staff.
Fort Napier, (Natal)	27.23	691.6	29.47	748.5	88.3	31.3		W			5		0					Blue sky	P'vt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.95	760.7	85.0	29.4		N			1		1					*D. clouds	
Galway, Queen's College			29.86	758.4	50	10.0		W			4		3					*D. clouds	Prof. A. H. Curtis.
Gibraltar, (Mediterranean)			30.30	769.6	65.7	18.7		NE			2		0					Blue sky	Corpl. C. Aitken, A.H.C.
Glasgow, Observatory			29.68	753.9	37.9	3.3		SW			6		9					Squally	Lewis Stuart.
Great Yarmouth			30.16	766.1	45	7.2		SW			3		2					Hazy	G. T. Watson.
Greenwich, Royal Obs'y			30.22	767.6	45.7	7.6		SW			4		8			blank	blank	*D. clouds	The Staff, for G. B. Airy.
Guernsey			30.31	769.9	49.5	9.7		SW			2		0					Blue sky	Dr. S. E. Hoskins.
Helston			30.24	768.1	50	10.0		SW			6		10n			0.7	17.8	Showery	M. P. Moyle.
Holyhead			29.93	760.2	46	7.8		W			6		4					Showery	John Tilston.
Kew, Observatory			30.23	767.8	45.5	7.5		SW	16	7.2			4					*D. clouds	The Staff.
Kingstown			29.91	759.7	45	7.2		W			5		3			blank	blank	Blue sky	George Mitchell.
Leicester Museum			30.07	763.8	47.5	8.6		SW			2		5					*D. clouds	Wm. J. Harrison, F.G.S.
Malta, (Mediterranean)			30.02	762.5	51.8	11.0		N			2		8k					*D. clouds	Corp'l. P. Bravis, A.H.C.
Nairn			29.47	748.5	37	2.8		WSW			4		10					Overcast	W. D. Penny.
Nassau, (Bahamas)			30.22	767.6	72.0	22.2		E			2		4					Gloomy	Surg. Maj. Henry.
Nottingham, Observatory			30.04	763.0	48.5	9.2		SW			6		3c,k		SW	0.020	0.51	*D. clouds	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			30.05	763.3	44.1	6.7		SSW			6		10					Raining	Rev. Stephen Whitty.
Oxford, Radcliffe Obs'y			30.16	766.1	47	8.3		SW			4		7					*D. clouds	J. Lucas.
Plymouth			30.24	768.1	49.0	9.4		SSW			4		10					Overcast	John Merrifield.
Roche's Point			30.02	762.5	47	8.3		W			6		5					Cloudy	W. Kennedy.
Saint Ann's Head			30.05	763.3	49	9.4		SW			7		5					*D. clouds	John C. Walker.
Saint Helier, (Jersey)			30.34	770.6	48.4	9.1		W			4		5					½ clouded	A. P. Amy.
Sandwick Manse, (Orkneys)			29.33	745.0	33.9	1.1		SW	30	13.4			5					Showery	Rev. C. Clouston, LL. D.
Scarborough																			F. Shaw.
Scutari Cemetery, (Turkey)			29.95	760.7	42.4	5.8		NNE			2		10					Drizzling	Sergt. W. H. Lyne.
Sheffield			29.96	761.0	46.9	8.3		SW			6		5			0.09f	2.29	*D. clouds	W. F. Cooper.
Silloth Rectory			29.76	755.9	47.8	8.8	81	NW			6		0			0.185	4.70	Blue sky	Rev. Francis Redford
Stonyhurst, Observatory			29.90	759.4	45.5	7.5		SW			4		10					Raining	Rev. S. J. Perry.
Stornoway, Lews C., (Hebr.)			29.33	745.0	35	1.7		WSW			7		10					Hail & snow	John Smith.
Stratfield Turgiss			30.24	768.1	45.6	7.6		SW			1		5					*D. clouds	Rev. Charles H. Griffith.
Thurso			29.36	745.7	35	1.7		SSW			6		10					Snowing	John Trotter.
Truro, Royal Institution			30.20	767.1	53	11.7		W			6		7					Raining	W. Newcombe.
Valencia, Observatory			30.01	762.2	46.4	8.0		W	24	10.7			7					*D. clouds	The Staff.
SUB-SERIES.																			
Calf of Man, (Isle of Man)																			Henry Mercer.
Cape Good Hope, Obs'y			30.02	762.5	69.2	20.7	48	WSW	12	5.4		6	8						The Staff, for E. J. Stone.
Hobart Town, (Tasmania)			30.34	770.6	65.0	18.3	88	S			2		10kn			0.01	0.3	Covered	Francis Abbott, F.R.A.S.
Leith, Restalrig Park			29.72	754.9	37.0	2.8		W			6		10k			0.20	5.1	Overcast	Andrew Gibb.
Mauritius, Observatory			29.79	756.7				E	8.0	3.6						0	0		C. Meldrum.
Melbourne, Observatory			30.29	769.4	60.2	15.7	57	ESE	12	5.4			8			0	0	Dense haze	R. L. J. Ellery.
Monach L't-house, (Hebrides)																			J. Youngclause.
North Unst, (Shetland Is.)			29.17	740.9	36	2.2		SW			8		8			blank	blank		Robert Burnet.

NOTE.—Generally, the originals do not give the relative humidity, rain-fall, or distinction between upper and lower clouds. The originals give the wind direction to 32 points and weather by the Beaufort notation. The originals give the barometer for Aberdeen, Cardington, Galway, Oxford, St. Helier, Sandwick, Scarborough, Stonyhurst, Leith, Monach and North Unst as read off and the amount of cloudiness for Stornoway by the scale 0 to 4. The wind-force is given by the scale 0 to 12 in the official series; 0 to 6 in the sub-series; except in lbs. per square foot for Greenwich and Hobart Town. The rain-fall is measured at Aberdeen at 10 a. m.; Bradford, 9 a. m.; Hobart Town, 7:30 a. m.; Nottingham, 6 p. m.; Mauritius, 9 a. m., local time. The elevation of Dartmoor is 1,400 feet, or 426.7 meters; Davos Platz, 5,105? feet, or 1,556.0? meters; Fort Napier, 2,260 feet, or 670.6 meters. *Detached clouds.

COSTA RICA SERIES.

By authority of the MINISTER OF FOREIGN AFFAIRS.

Furnished by the coöperation of Senor Federico Maison, Director of the Central Office of Statistics and Meteorology.

San José																			

DANISH SERIES.

Furnished by the coöperation of Captain N. Hoffmeyer, Director of the Royal Danish Meteorological Institute at Copenhagen.

Copenhagen			30.10	764.5	35.1	1.7	93	SSW			2		10					Foggy	
Fanöe			30.08	764.1	37.6	3.1	91	SW			4		2						
Godthaab, (Greenland)			29.46	748.2	28.8	—12.9	84	Calm			0		10					Snowing	
Ttykkisholm, (Iceland)			28.83	732.3	23.5	— 4.7	86	N			8		8						
Shorshavn, (Faröe)			28.89	733.7	34.7	1.5	94	SW			5		7					Snow & hail	
Vestervig			29.98	761.6	37.4	3.0	91	SSW			4		2						

NOTE.—The originals give the wind-force by the scale 0 to 6; occasionally, weather by Vienna symbols; no distinction between the amount of upper and lower clouds.

FRENCH SERIES.

Furnished by the co operation of His Excellency, U. J. Le Verrier, Director of the Paris Observatory, and the respective Observers.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters	Weather	Observer.
Alençon			30.42	772 6	46.4	8	73	W			1		5s		W	0.04	1.	Cloudy	Normal School.
Amiens			30.31	769.9	46.4	8.0	86	Calm			0		0			0.197	5.0	Clear	Normal School.
Avignon			30.27	768 8	56.8	13.8	53	NNW			3		0			0	0	Very clear	Normal School.
Bar-sur-Seine			30.37	771.4	48.7	9.3	75	W			1		8kn		W	0.035	0.9	Very cloudy	C. Saillard.
Beaumette, (near Angers)			30.41	772.4	49.3	9.6	61	SW	2.0	0.9					W	0.012	0.3		Beaumette Observ'tory.
Beauvais			30.37	771.3	46.9	8.3	78	SW			1		2		W	0.012	0.30	Slightly cl'dy	Normal School.
Besançon			30.36	771.1	48.2	9	78	S			2		2		SW	0.04	1.	Slightly cl'dy	Normal School.
Bourg en Bresse			30.42	772.7	48.2	9	76	W			1		5kn		E	0.047	1.2	Cloudy	Normal School.
Bourges			30.38	771.6	49.3	9.6	89	WSW			2		5		WSW	0.08	2.	Partly cl'dy.	Normal School.
Brest			30.30	769.6	49.8	9.9	71	WSW			3		10		WSW	0.049	1 25		Naval Observatory.
Carcassonne			30.39	771.9	51.4	10.8	78	W			2		10		E	0	0	Covered	Normal School.
Caen																			Normal School.
Chartres			30.32	770.1	54.0	12.2	43	NW			2		2		SE	0	0		Normal School.
Châlons-sur-Marne			30.36	771.2	51.1	10.6	50	N			2		0			0.039	1.0	Clear	Normal School.
Clermont			30.34	770.6	52.3	11.3	75	NNE			1		10		NW	0.01;	0.3		Puy de Dome Obs'y.
Commercy			30.30	769.5	46.9	8.3	94	NW			4		2kn		NW	0	0	Slightly cl'dy	Normal School.
Commune de Gréasque*			30.29	769.4	51.6	10.9	58	NW			2		2		NW	0	0		M. Kina.
Grenoble			30.28	769.2	44.2	6.8	66	NE			1		5kn,s		SE	0	0	Cloudy	Normal School.
La Roche-sur-Yon			30.45	773.3	50.7	10.4	68	S			2		8		S	0.079	2.0	Very cloudy	Normal School.
Le Mans			30.41	772.5	45.1	7.3	92	W			2		0			0.033	0.85	Clear	Normal School.
Lons-Le-Saulnier			30.58	776.8	49.1	9.5	78	W			1		0			0	0	Clear	Normal School.
Lorient			30.43	772.8	51.4	10.8	61	WSW			2		10			0.106	2.7	Covered	Naval Observatory.
Mâcon			30.44	773.2	46.6	8.1	86	Calm			0		5		S	0	0	Cloudy	Normal School.
Metz			30.39	772.0	43.3	6.3	88	WNW			3		7k			0.059	1.5		M. Schuster.
Mirecourt			30.36	771.1	44.1	6.7	94	SSW			2		10		NNE	0.16	4.	Covered	Normal School.
Nismes			30.28	769.0	60.8	16	50	N			4					0	0		Normal School.
Orleans			30.37	771.4	48.9	9.4	71	NW			2		2		NW	0	0	Slightly cl'dy	Normal School.
Paris, Observatory			30.38	771.6	49.1	9.5	56	W			2		3k		W	0.034	0.87	Slightly cl'dy	National Observatory.
Parthenay																			Normal School.
Privas			30.30	769.6	50.5	10.3		NW			1		2		N	0	0	Slightly cl'dy	Normal School.
Rochefort, Observatory			30.32	770.0	54.3	12.4	68	NNW			3		1		ESE	0	0	Clear	Naval Observatory.
Rouen			30.33	770.4	49.8	9.9	69	WSW			2		2		SW	0.039	1.0	Slightly cl'dy	Normal School.
Saint Lo																			Normal School.
Tarbes																			Normal School.
Villefranche	29.26	743.2	30.36	771.2	50.0	10	79	W			2		2		E	0	0	Slightly cl'dy	Normal School.
			30.40	772.2	50.0	10	87	SE			1		8			0.020	0.5	Very cloudy	Normal School.
Sub-Series.																			
Fort de France, Martinique			29.95	760.7	75.9	24.4													L'Abbé Marchési.
Marseilles			30.24	768.2	55.6	13.1	67	ESE			1		1			0	0	Partly cl'dy.	Marseilles Observatory.
Mont-Louis	25.12	638.1	30.44	773.1	42.6	5.9	63	NW	7.4	3.33			2		N	0	0		—, Falguère.
Montsouris, Paris			30.36	771.1	50.5	10.3	58	W			2		3		W	0.024	0.6		Montsouris Observatory
Perpignan			30.35	770.9	58.6	14.8	66	N	20.5	9.17			4		NW	0	0		Dr. Fines.
Pic du Midi, (Summit,) H. P.																			M. Baylac.
Pic du Midi, (Plantade,) H. P.	22.72	577.1			32.9	0.5		SW			1		8			0.374	9.5	Snowy	General de Nansouty.
Saint Maur, (near Paris)			30.37	771.5	48.0	8.9	65	WSW			1		3			0.063	1.6	Cloudy	E. Renou.
Toulouse			30.48	774.3	52.0	11.1	90	NW			1		10			0.071	1.8		Toulouse Observatory.
Tours			30.40	772.2	50.7	10.4	62	WSW			2		5		WNW	0.028	0.7		C. Marquet.
Versailles, (near Paris)			30.36	771.2	48.9	9.4	65	WNW			2		7			0.056	1.42	Fair	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai)			30.10	764.5	40.1	4.5	92	NNW	6.5	2.92			10			0.701	17.8	Rainy	Marc Dechevrens, S. J.

Note.—Generally, the originals give the wind-force by the scale 0 to 7; no distinction between upper and lower clouds, and, in the official series, the amount by the scale 0 to 4 the rain-fall as measured at 7, 8 or 9 a. m., local time; at Clermont, 9 a. m. of the following day; the weather in general terms as published. The elevation of Clermont is 388 meters, or 1,272.9 feet; Commune de Gréasque, 322 meters, or 1,056.4 feet; Tarbes, 308 meters, or 1,010 feet; Mont-Louis, 1,586.40 meters, or 5,204.8 feet; Pic du Midi, (Summit,) 2,577 meters, or 9,439.1 feet; Pic du Midi, (Plantade,) 2,366 meters, or 7,762.6 feet. In correcting the Mont-Louis barometric observations for altitude, the constant 135. millimeters has been added. *Bouches-du-Rhône

GERMAN SERIES.

Furnished by the coöperation of Professor Dr. G. Neumayer, Director of the German Naval Observatory, Hamburg.

Bamberg			30.28	769.0	34.7	1.5	92	SW			3		10			0.118	3.0	Smoke-haze	Prof. T. Hoh
Berlin			30.24	768.0	36.5	2.5	87	S			1		10			0.035	0.9	Rain & fog	Prof. Arndt.
Breslau			30.30	769.6	32.7	0.4	86	SE			3		3			0	0		Royal University Obs'y
Carlsruhe			30.32	770.0	44.2	6.8	94	SW			4		10			0.102	2.6	Raining	A. Senz.
Cassel			30.24	768.1	44.6	7.0	73	NNW			2		1	NW		0.016	0.4		Dr. H. Möhl.
Crefeld			30.28	769.2	47.8	8.8	90	W			2		3			0.12	3.		Director Lose.
Emden			30.31	769.9	42.1	5.6	83	W			1		5			0.165	4.2		Prof. Prestel.
Frankfort on the Main			30.31	769.9	46.9	8.3	83	SSW			1		2			0.118	3.0		Physical Society.
Friedrichshafen	28.90	734.1	30.39	771.8	43.5	6.4	80	W			1		10			0.177	4.5	Raining	M. Wilhelm.
Hamburg			30.20	767.1	42.4	5.8	81	W			2		2			0.228	5.8	Clear	Captain F. Hegemann.
Kiel			30.17	766.2	40.3	4.6	84	WSW			2		0			0.150	3 8		Prof. G. Karsten.
Königsberg, (Prussia)			30.32	770.1	24.3	— 4.3	86	SE			2		10			0	0		Prof. E. Luther.
Koslin			30.23	767.7	32.5	0.3		S			4		10			0	0		H. Müller.
Leipsic			30.26	768.7	35.6	2.0	96	SW			2		10			0.098	2.5	Rain & fog	Prof. Bruhns.
Memel			30.34	770.6	22.5	— 5.3	88	S			3		10ks			0	0		Reinbrecht & Skalweit.
Münster			30.23	767.8	45.5	7.5	78	SW			1		4			0.102	2.6		Prof. E. Heis.
Neufahrwasser			30.28	769.2	27.1	— 2.7	85	SSW			3		10			0.004	0.1		A Lothe.
Posen			30.30	769.5	34.3	1.3	81	S			3		6			0	0		Dr. Magener.
Strassburg, (in Alsace)			30.35	771.0	46.8	8.2	85	SW			1		10			0.126	3.2		Dr. Schur.
Stuttgart			30.31	769.8	45.0	7.2	90	W			1		10			0.075	1.9	Raining	Prof. Schoder.
Thorn																			Dr. Hasenbalg.
Treves, (Trier)			30.27	768.8	46.0	7.8	62	NW			1		2			0	0		Prof. Flesch.
Weissenburg, (Bavaria)	28.74	730.0	30.35	770.8	38.5	3.6	88	Calm			0		10			0	0		Dr. von Bebber.
Wustrow, Naval School			30.23	767.9	32.7	0.4	98	WSW			3		6			0	0		E. F. Schütz.
German Naval Series.																			

Note.—The elevation of Friedrichshafen is 413.4 meters, or 1,356.3 feet; Weissenburg, 431 meters, or 1,414.0 ft. In the originals the distinction between the amount of upper and lower clouds is not made. It is not always certain that the remarks in the weather column refer to the moment of observation.

GREEK SERIES.

Furnished by the coöperation of Professor Dr. J. F. Julius Schmidt, Director of the Royal Observatory at Athens.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Athens			29.91	759.7	49.3	9.6		NW										Cloudy	

Note.—The originals give the barometer corrected, but not reduced to sea-level; occasionally the kind of clouds; the weather as published. They omit the humidity, wind-force, amount of cloudiness and rain-fall.

ITALIAN SERIES.

Furnished by the cooperation of His Excellency the Minister of Agriculture, Industry and Commerce, and the respective Observers.

Udine			30.30	769.5	39.7	4.2	43	Calm	0	0			9			0	0		Prof. Giovanni Clodg
Stelvio	22.19	563.7			18.3	— 7.6		Calm			0		10			0	0		Signora Ernesta Manfredi.
Valdobbia	22.23	564.6			25.5	— 3.6	74	W			2		2	NNW		0	0		Ab. Dom. Mongini.
Padua			30.32	770.1	37.2	2.9	61	NNE	3.8	1.7			10	W		0	0		Prof. Dott. Lor nzoni.
Vicenza			30.31	769.8	39.6	4.2	58	E	1.8	0.8			5			0	0		Conte Alm. Da Schio.
Verona			30.34	770.5	40.1	4.5	68	E			1		6			0	0		Dott. B. Bertoncelli.
Bergamo	28.92	734.5	30.28	769.1	35.6	2.0	64	S			2		9			0	0		Prof Trionfini Carlo.
Domodossola			30.29	769.4	39.2	4.0	50	SW			6		2			0	0		Prof. Giuseppe Calza.
Milan			30.33	770.4	37.0	2.8	95	NE			1		8	NE		0	0		Ab. Gio. Capelli
Pavia			30.33	770.4	35.6	2.0	73	SW			1		9			0	0		Prof. Gio. Cantoni.
Moncalieri			30.34	770.5	37.6	3.1	73	NNE	2.5	1.1			4	SW		0	0		Prof. P. F. Denza.
Mondovi	28.33	719.5	30.30	769.6	37.2	2.9	53	NNW			4		1	NW		0	0		Prof. D. C. Bruno.
Porto Maurizio			30.33	770.4	50.0	10.0	42	WNW			2		5			0	0		Prof. L. Vassallo.
Genoa			30.28	769.0	48.9	9.4	30	N	3.5	1.1			10	N		0	0		Prof. G. M. Garibaldi.
Piacenza			30.34	770.7	35.1	1.7	76	NW	0.7	0.3			10			0	0		Dott. G. Manzi.
Parma			30.32	770.2	37.4	3.0	60	NNE			2		9			0	0		Prof. P. Pigorini.
Florence			30.29	769.4	48.2	9.0	42	N			2		4			0	0		Cav. F. Meucci.
Leghorn			30.27	768.8	46.9	8.3	48	NE	8.1	3.6			9	N		0	0		Prof. P. Monte.
Siena	29.02	737.0	30.26	768.7	42.1	5.6	51	NNE	0	0			5	N		0	0		Prof. L. Toscani.
Urbino	28.67	728.2	30.32	770.0	36.1	2.3	68	NNE			2		2			0	0		Prof. P. Serpieri.
Pesaro			30.33	770.3	42.4	5.8	67	N	16.1	7.2			1	N		0	0		Prof. Luigi Guidi.
Ancona			30.30	769.6	44.1	6.7	53	N			4		1			0	0		Prof. F. De— Bosis.
Grosseto			30.29	769.3	49.6	9.6	44	NE			4		3	NW		0	0		Avv. P. Ponticelli.
Rome			30.18	766.6	49.5	9.7	62	NNW	15.0	6.7			1	NE		0	0		Prof's. P. Secchi & L. Respighi.
Naples, O. U			30.15	765.9	47.7	8.7	37	ENE			4		6	NNW		0	0		Prof. L. Palmieri.
Lecce			30.00	762.1	46.0	7.8	62	NNW	24.2	10.8			10			0.264	6.7	Raining	Prof. C. De—Giorgi.
Cosenza			30.08	764.1	46.9	8.3	69	N	10.5	4.7			9			0	0		Prof. F. D. Conti.
Cagliari			30.21	767.3	53.4	11.9	38	W			1		1			0	0		Prof. A. Pacinotti.
Ilioposto, (Sicily)			29.99	761.8	45.3	7.4	62	N			6		8	S		0.118	3.0		Prof. F. Cafiero.
Palermo			30.05	763.2	48.6	9.2	45	N	21.0	9.4			9			0.142	3.6	Raining	Prof. G. Cacciatore.
Caltanissetta	28.04	712.2	30.06	763.4	43.7	6.5	79	NNW			6		10	E		0	0		Prof. A. Pagani.
Siracusa			30.08	763.9	54.0	12.2	52	ENE			6		9	ENE		0.177	4.5		Prof. V. Giuliano.
Sub-Series.																			
Naples, S. R.			30.17	766.2	48.3	6.3	44	ENE	5.6	2.5			4	E		0	0		Prof. F. Brioschi.

Note.—The originals give the wind-force by the scale 0 to 4, or the velocity in kilometers per hour; generally, no distinction between upper and lower clouds, occasionally the weather by the Vienna symbols. The elevation of Stelvio is 2,543.0 meters, or 8,342.9 feet; Valdobbia, 2,548.0 meters or 8,359.3 feet; Bergamo, 379.6 meters, or 1,245.3 feet; Mondovi, 556 meters, or 1,824.2 feet; Siena, 346.5 meters, or 1,143.3 feet; Urbino, 451 meters, or 1,479.7 feet; Caltanissetta, 570.3 meters, or 1,871.0 feet.

JAPANESE SERIES.

Furnished by the coöperation of the Imperial University of Tokei, Japan.

Tokei			30.08	764.0	35	1.7		N	2	0.9			0			0	0		Prof. P. V. Veeder.

Note.—The originals give the amount of cloudiness by the scale 0 to 4 without distinguishing between upper and lower clouds. The rain-fall is measured at 7 a. m., local time.

MEXICAN SERIES.

By authority of the Secretary of Public Works.

Furnished by the coöperation of Senor Mariano Barcena, Director of the Central Meteorological Observatory in the City of Mexico.

Mexico																		Mariano Barcena. Vicente Reyes. Miguel Perez. (Engineers in charge.)	

Note.—The elevation of Mexico is 2,290 meters, or 7,512.9 feet. The rain-fall is measured at 6 a. m., local time.

NETHERLANDS' SERIES.

Furnished by the cooperation of Professor Buys Ballot, Director of the Royal Meteorological Institute of the Netherlands at Utrecht.

Flushing			30.31	769.9	45.3	7.4		W			4					0.350	1.0		
Groningen			30.15	765.8	43.0	6.1										0.130	3.3		
Helder			30.20	767.1	45.0	7.2		SW			2					0.035	0.9		
Utrecht			30.21	767.4	48.4	9.1	72	WSW			3		2			0.059	1.5	Light cloudy.	

Note.—The originals give the wind-pressure in kilograms per square meter; for Utrecht, they give the weather as published, from which the amount of cloudiness is taken by the scale 0 to 4, without distinguishing between upper and lower clouds. It is assumed that the barometer readings have been reduced to sea-level.

NORWEGIAN SERIES.

Furnished by the cooperation of Professor H. Mohn, Director of the Royal Norwegian Meteorological Institute at Christiania.

Bergen			29.58	751.2	38.5	3.6	83	S	37.1	16.6			10			0.350	8.9		
Bröno			29.47	748.5	33.8	1.0	81	S	24.6	11			8			0	0		
Christiania			29.82	757.4	33.3	0.7	94	SSW	0	0			10			0.09	2.4	Light fog	
Tromsö			29.43	747.6	28.4	— 2.0	68	WSW	29.1	13			10			0	0		

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols. The cloudiness and weather at Bergen refer to 2h., p. m., local time, instead of 1h., 4 min.

PORTUGUESE SERIES.

Furnished by the coöperation of J. C. de Brito Capello, Director of the Meteorological Observatory of the Infante Don Luiz at Lisbon.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Angra, (Azores)	.....	.....	30.37	771.5	59.0	15.0	93	SSW	4.9	2.2	.....	.....	7	.....	.....	0.252	6.4	.....	Dr. J. A. Sampaio.
Campo Major	.....	.....	30.37	771.3	55.9	13.3	66	ESE	3.8	1.7	.....	.....	4	ESE	.....	0	0	.....	Dr. A. M. R. dos Santos.
Funchal, (Madeira)	.....	.....	30.43	772.9	61.4	18.0	62	SW	6.3	2.8	.....	.....	0	.....	.....	0	0	.....	Capt. D. A. de Cunha.
Lisbon	.....	.....	30.41	772.4	58.1	14.5	73	N	11.2	5.0	.....	.....	5	WNW	.....	0	0	.....	The Observatory.
Ponta Delgada, (Azores)	.....	.....	30.43	772.8	60.1	15.6	89	S	5.6	2.5	.....	.....	3	.....	.....	0.146	3.7	.....	.....

Note.—The originals give the wind-velocity in kilometers per hour; occasionally, the weather by the Vienna symbols; the amount of cloudiness without distinguishing between upper and lower clouds; the barometer corrected but not reduced to sea-level. The rain-fall at Lisbon is measured at noon, instead of 0 h. 6 m., p. m.

RUSSIAN SERIES.

Furnished by the cooperation of Professor H. Wild, Director of the Imperial Central Physical Observatory of Russia, at St. Petersburg.

Warsaw	.....	.....	30.35	771.0	25.7	— 3.5	91	Calm	0	0	.....	.....	10	.....	.....	.....	.....	.....	Astronomical Obs.
Wilna	.....	.....	30.37	771.3	20.5	— 6.4	70	Calm	0	0	.....	.....	10	.....	.....	.....	.....	.....	Astronomical Obs.
Dorpat	.....	.....	30.39	771.9	17.1	— 8.3	94	S	7	3	.....	.....	10	.....	.....	.....	.....	.....	Physical Cabinet.
St. Petersburg	.....	.....	30.35	771.0	16.7	— 8.5	94	NNW	2	1	.....	.....	10	.....	.....	.....	.....	Light snow.	Central Physical Obs.
Kuopio	.....	.....	30.26	768.5	17.6	— 8.0	100	S	13	6	.....	.....	10	.....	.....	.....	.....	.....	Ch. Forsten.
Kieff	.....	.....	30.24	768.0	30.0	— 1.1	90	W	4	2	.....	.....	6	.....	.....	.....	.....	.....	Physical Cabinet.
Nikolaiev	.....	.....	30.32	770.0	23.2	— 4.9	81	ENE	13	6	.....	.....	6	.....	.....	.....	.....	.....	Kurdakof
Kertch	.....	.....	30.15	765.8	23.7	— 4.6	88	ENE	11	5	.....	.....	10	.....	.....	.....	.....	.....	Lagorio.
Moscow	.....	.....	30.32	770.1	9.3	—12.6	81	NW	9	4	.....	.....	2	.....	.....	.....	.....	.....	Meteorological Obs.
Lugan	.....	.....	30.21	767.2	16.9	— 8.4	76	NNE	2	1	.....	.....	10	.....	.....	.....	.....	.....	Meteorological Obs.
Archangel	.....	.....	30.33	770.4	9.7	—12.4	100	Calm	0	0	.....	.....	10	.....	.....	.....	.....	.....	Ogorodnikof.
Tiflis	28.66	728.0	30.12	765.1	40.5	4.7	78	Calm	0	0	.....	.....	10	.....	.....	.....	.....	.....	Physical Observatory.
Astrakhan	.....	.....	30.19	766.7	27.5	— 2.5	96	Calm	0	0	.....	.....	10	.....	.....	.....	.....	.....	Sebastianof.
Kasan	.....	.....	30.26	768.6	9.1	—12.7	96	Calm	0	0	.....	.....	10	.....	.....	.....	.....	.....	Physical Cabinet.
Orenburg	.....	.....	29.82	757.3	8.4	—13.1	80	SW	16	7	.....	.....	8	.....	.....	.....	.....	.....	Tschernischei.
Ekaterinburg	29.17	740.9	30.21	767.2	9.7	—12.4	73	SSE	4	2	.....	.....	10	.....	.....	.....	.....	.....	Meteorogical Obs.
Nukuss	.....	.....	30.23	767.8	13.6	—10.2	80	ENE	9	4	.....	.....	1	.....	.....	.....	.....	.....	.....
Kasaly	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Bobrof.
Tashkend	28.48	723.5	30.36	771.1	14.7	— 9.6	94	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Michelson.
Barnaul	.....	.....	30.47	773.9	—18.9	—28.3	85	W	4	4	.....	.....	0	.....	.....	.....	.....	.....	Meteorological Obs.
Yenisseisk	.....	.....	30.13	765.4	— 9.6	—23.1	81	Calm	0	0	.....	.....	0	.....	.....	.....	.....	.....	Marks.
Irkutsk	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Usolzef.
Peking, (China)	.....	.....	30.31	769.9	26.4	— 3.1	91	Calm	0	0	.....	.....	10	.....	.....	Blank	Blank	.....	Physical Observatory.
Nertchinsk	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Meteorological Obs.
Vladivostock	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Nikolaievsk, on the Amoor	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
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.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols; they omit the rain-fall. The elevation of Tiflis is 409 meters, or 1,341.8 feet; Ekaterinburg, 306.4? m., or 1,005.2? ft.; Tashkend, 494.2? m., or 1,621.3? ft.; Irkutsk, 392 m., or 1,286 ft.; Nertchinsk, 592.0? m., or 1,942.2? ft.

SPANISH SERIES.

Furnished by the coöperation of Antonio Aguilar, Director of the Royal Observatory at Madrid, and of Don Cecilio Pujazon, Captain R. N. Director of the Naval Observatory at San Fernando.

Madrid	.....	.....	30.39	771.8	56.3	13.5	58	NE	12.7	5.67	.....	2	2	NE	.....	0	0	Light clouds	Royal Observatory.
San Fernando	.....	.....	30.37	771.3	63.1	17.3	79	SSW	7.6	3.4	.....	0	2	.....	SW	.....	.....	.....	Naval Observatory.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
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.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Note.—The originals give the weather in general terms, as published; rain-fall for San Fernando from preceding to following midnight; wind-velocity for Madrid in kilometers per hour.

SWEDISH SERIES.

Furnished by the coöperation of Professor R. Rubenson, Director of the Royal Swedish Meteorological Institute, at Stockholm, and of Dr. H. H. Hildebrandsson, Chief of the Meteorological Division of the Upsala Observatory.

Haparanda	.....	.....	30.11	764.8	18.3	— 7.6	95	SSE	.....	.....	4	.....	4	.....	.....	0	0	.....	
Umea	.....	.....	30.02	762.4	23.4	— 4.8	100	SW	.....	.....	7	.....	10	.....	.....	.....	.....	Snowing	
Hernosand	.....	.....	30.08	764.0	25.5	— 3.6	95	S	.....	.....	6	.....	10	.....	.....	.....	.....	Snowing	
Stockholm	.....	.....	30.02	762.5	30.6	— 0.8	96	S	.....	.....	6	.....	10	.....	.....	0.004	0.1	.....	
Wisby	.....	.....	30.17	766.4	30.2	— 1.0	84	WSW	.....	.....	6	.....	10	.....	.....	0	0	.....	
Sub-Series.																			
Upsala	.....	.....	30.00	762.1	30.2	— 1.0	79	S	21.3	9.5	.....	.....	10	.....	.....	0.048	1.23	Snowing	Dr. Hildebrandsson.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Note.—The originals give the wind-force by the scale 0 to 6, and Upsala also velocity in meters per second; occasionally, the weather by the Vienna symbols, or in general terms; no distinction between the amount of upper and lower clouds. The rain-fall is measured at 8 a. m., local time.

SWISS SERIES.

Furnished by the coöperation of Professor R. Wolf, Director of the Observatory at Zurich, and of Professor E. Plantamour, Director of the Observatory at Geneva.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Geneva	28.91	734.3	30.37	771.3	44.2	6.8	77	NNE	.....	.....	1	.....	10	.....	.....	0	0	Covered	The Observatory.
Zurich	28.70	728.9	30.37	771.5	42.1	5.6	93	SE	.....	.....	1	.....	9	.....	.....	0	0	Cloudy.....	The Observatory.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—For Geneva the corresponding departures from the normal values are: Barometer, +7.3 mm; Thermometer, +4.3 cent.; Relative Humidity, +2 per cent.

NOTE.—The rain-fall is measured at Zurich at 7 a. m. on the following day. The originals give the barometer corrected but not reduced to sea-level; the wind-force by the scale 0 to 4 for Zurich; the amount of cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The elevation of Geneva is 408 meters, or 1,339 feet, and that of Zurich 470 meters, or 1,542 feet.

TURKISH SERIES.

Furnished by the coöperation of A. Coumbary, Effendi, Director of the Central Observatory at Constantinople, and of Professor C. V. A. Van Dyck, Superintendent of the Lee Observatory at Beirut.

Constantinople	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Fao, (Persian Gulf)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Salonica	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Valona	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Varna	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
SUB-SERIES.																			
Beirut, (Syria,) Lee Obs'y	.....	.....	29.00	759.5	68.1	14.5	66	SSE	.....	.....	2	.....	8n	.....	SW	0.20	5.1	Overcast.....	Prof. C. V. A. Van Dyck

NOTE.—The originals give the wind-force by the scale 0 to 7, (except Beirut, by the scale 0 to 12, and Constantinople velocity in meters per second;) the weather in general terms as published; no distinction between upper and lower clouds, and, except Constantinople and Beirut, the amount by the scale 0 to 4. It is assumed that the barometer is reduced to sea-level.

CANADIAN SERIES.

Furnished by the coöperation of Professor G. T. Kingston, Director of the Magnetic Observatory at Toronto, and Superintendent of the Meteorological Office of the Dominion of Canada, and the respective Observers. Those marked with a star (*) are also telegraphed daily to the office of the Chief Signal Officer, U. S. Army.

Bathurst, N. B	.....	.....	30.02	762.5	11.6	—11.3	84	Calm	0	0	.....	.....	5	.....	.....	.....	.....	.....	Hon. J. Ferguson.
Brockville, Ontario	.....	.....	30.18	766.6	33	0.6	.....	Calm	0	0	.....	.....	10s	.....	.....	0	0	Cloudy.....	W. R. Bigg.
*Chatham, N. B	.....	.....	30.02	762.5	20	— 6.7	94	Calm	0	0	.....	8k	2ks	N	N	0.05	1.3	Cloudy.....	G. A. Blair.
Charlottetown, P. E. Island	.....	.....	30.03	762.7	20	— 6.7	92	Calm	0	0	.....	5k	0	.....	.....	Inap.	Inap.	Fair.....	H. J. Cundall, C. E.
Cornwall, Ontario	.....	.....	30.14	765.5	33.6	0.9	89	W	.....	.....	1	.....	10s	.....	.....	0	0	Dull	James Smith, M. A.
Dalhousie, N. B	.....	.....	30.10	764.5	18.0	— 7.8	97	NW	.....	.....	1	.....	.....	.....	.....	0.30	7.6	Overcast.....	H. A. Johnson.
Esquimault, B. C	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	W. H. Bevis.
*Father Point, Quebec	.....	.....	30.04	763.0	22	— 5.6	89	Calm	0	0	.....	.....	10n	.....	.....	0.18	4.6	Threatening	J. McWilliams.
Fredericton, N. B	.....	.....	30.08	764.0	20.0	— 6.7	99	Calm	0	0	.....	.....	10s	.....	.....	0.045	1.14	Cloudy.....	Prof. Harrison.
*Fort Garry, Manitoba	.....	.....	30.22	767.6	15	— 9.4	96	S	9	4.0	.....	Haze	Haze	S	S	0	0	Hazy	James Stewart.
Goderich, Ontario	.....	.....	30.30	769.6	31.3	— 0.4	95	Calm	.....	.....	0	.....	10n	.....	.....	Inap.	Inap.	Foggy	H. J. Strang, M. A.
Granton, Ontario	29.08	738.6	30.23	767.8	31.1	— 0.5	.....	NE	.....	.....	1	.....	10n	.....	.....	0	0	Cloudy.....	James Grant.
*Halifax, N. S	.....	.....	30.00	762.0	26	— 3.3	97	N	2	0.9	.....	.....	10n	.....	.....	Inap.	Inap	Cloudy.....	F. Allison, M. A.
Hamilton, Ontario	.....	.....	30.24	768.1	35.2	1.8	84	SW	.....	.....	1	.....	10n	.....	.....	0	0	Cloudy.....	G. Dickson.
Heart's Content, N. F	.....	.....	29.91	759.7	30	— 1.1	100	Calm	.....	.....	0	.....	10	.....	.....	0.25	6.3	Overcast.....	E. Weedon.
*Kingston, Ontario	.....	.....	30.22	767.6	32	0.0	95	Calm	0	0	.....	.....	10s	.....	.....	0	0	Cloudy	S. Woods, M. A.
*Montreal, Quebec	.....	.....	30.10	764.5	33	0.6	98	W	8	3.6	.....	.....	Sm'e	.....	.....	0	0	Smoky.....	C. H. McLeod, C. E.
*Ottawa, Ontario	.....	.....	30.14	765.5	37	2.8	78	W	4	1.8	.....	.....	10..8	.....	SW	0	0	Cloudy	J. B. Haney.
*Parry Sound, Ontario	.....	.....	30.24	768.1	32	0.0	96	Calm	0	0	.....	.....	10n	.....	.....	0.02	0.5	Cloudy	Rev. R. Mosley.
Port Dover, Ontario	.....	.....	30.22	767.6	34	1.1	89	NW	5	2.2	.....	10k	0	W	.....	0	0	Cloudy	H. Morgan.
Port Hastings, N. S	.....	.....	30.00	762.0	27.8	— 2.3	.....	W	2	0.9	.....	.....	.....	.....	.....	0	0	Fine	Peter Grant.
Port Stanley, Ontario	.....	.....	30.24	768.1	33	0.6	91	W	5	2.2	.....	.....	10..	.....	W	0	0	Cloudy.....	M. Payne.
*Quebec, Quebec	.....	.....	30.11	764.8	27	— 2.8	88	Calm	0	0	.....	.....	10..	.....	.....	0	0	Cloudy.....	Capt. Ashe, R. N.
*Rockliffe, Ontario	.....	.....	30.18	766.6	32	0.0	94	W	2	0.9	.....	.....	10.	.....	W	0	0	Cloudy.....	
St. John, N. B	.....	.....	30.09	764.3	24.0	— 4.4	93	Calm	0	0	.....	9k	0	.....	.....	0.01	0.3	Overcast.....	G. Murdoch, C. E.
*Saugeen, Ontario	.....	.....	30.23	767.8	33	0.6	89	N	8	3.6	.....	.....	10s	.....	.....	0.02	0.5	Cloudy.....	K. Stewart.
Stayner, Ontario	.....	.....	30.26	768.6	33	0.6	95	N	5	2..	.....	.....	10n	.....	N	Inap.	Inap.	Light snow..	R. J. Cole.
Stratford, Ontario	28.89	733.8	30.23	767.8	31.4	— 0.3	96	NW	7	3.1	.....	.....	10s	.....	.....	0	0	Cloudy.....	C. J. MacGregor, M. A.
*Sydney, C. B	.....	.....	30.00	762.0	26	— 3.3	95	NW	1	0.4	.....	5k	5s	.....	.....	0	0	Cloudy.....	T. C. Hill.
*Toronto, Ontario	.....	.....	30.22	767.6	35	1.7	88	NW	6	2.7	.....	.....	10ks	.....	NW	0	0	Cloudy.....	Magnetic Observatory.
Woodstock, Ontario	.....	.....	30.22	767.6	33.3	0.7	91	W	9	4.0	.....	.....	10s	.....	.....	0	0	Cloudy.....	J. Montgomery.
SUB-SERIES.																			
St. Johns, Newfoundland	.....	.....	29.97	761.2	32.0	0.0	.....	NE	.....	.....	.....	.....	10n	.....	.....	0.50	12.7	Fair.....	John Delany.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
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.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—The originals for Brockville, Charlottetown, Port Dover, Port Stanley, Stayner, St. Johns, N. F. and those telegraphed, give the amount of cloudiness by the scale 0 to 4. The elevation of Granton is 1,015 feet, or 309.4 m.; Stratford, 1,182 feet, or 360.3 m

UNITED STATES SERIES.

Furnished by the coöperation of Bvt. Brig. Gen. Albert J. Myer, Chief Signal Officer, U. S. Army.

STATIONS.	BAROMETER. Corrected for instrum'tal error and temperature. Inches.	BAROMETER. Corrected for instrum'tal error and temperature. Millimeters.	BAROMETER. Reduced to sea-level. Inches.	BAROMETER. Reduced to sea-level. Millimeters.	TEMPERATURE OF THE AIR. Fahrenheit.	TEMPERATURE OF THE AIR. Centigrade.	RELATIVE HUMIDITY. Per cent.	WIND. Direction. From—	WIND. Velocity. Miles per hour.	WIND. Velocity. Meters per second.	WIND. Force. 0—10.	CLOUDS. Amount. Up'er 0—10.	CLOUDS. Amount. Low'r 0—10.	CLOUDS. Direction. Upper. From—	CLOUDS. Direction. Lower. From—	RAIN FALL OR MELTED SNOW IN THE PAST 24 HOURS. Inches.	RAIN FALL OR MELTED SNOW IN THE PAST 24 HOURS. Millimeters.	WEATHER.	OBSERVER.
Albany, N. Y.	.....	.....	30.12	765.0	31	— 0.6	79	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Alpena, Mich.	.....	.....	30.32	770.1	28	— 2.2	88	NW	10	4.5	.....	.....	10s	.....	NW	Inap.	Inap.	Cloudy	
Atlantic City, N. J.	.....	.....	30.15	765.8	39	3.9	91	NW	4	1.8	.....	.....	10s	.....	.....	0.11	2.8	Cloudy	
Augusta, Ga.	.....	.....	30.23	767.8	54	12.2	87	Calm	0	0	.....	.....	10s	.....	.....	0	0	Cloudy	
Baltimore, Md.	.....	.....	30.16	766.1	41	5.0	91	Calm	0	0	.....	Haze	5s	.....	.....	0.12	3.0	Foggy	
Barnegat, N. J.	.....	.....	30.13	765.3	37	2.8	95	NW	4	1.8	.....	8k	Fog	NW	.....	0.20	5.1	Fair	
Bismarck, Dakota	28.33	719.6	30.12	765.0	13	—10.6	81	Calm	0	0	.....	Haze	Haze	.....	.....	0	0	Hazy	
Boston, Mass.	.....	.....	30.09	764.3	35.5	1.9	80	NW	6	2.7	.....	10cs	Haze	NW	.....	0	0	Cloudy	
Breckenridge, Minn.	.....	.....	30.29	769.4	16	— 8.9	100	E	4	1.8	.....	.....	Fog	.....	.....	0	0	Dense fog	
Buffalo, N. Y.	.....	.....	30.19	766.8	34	1.1	90	Calm	0	0	.....	.....	10s	.....	.....	0	0	Cloudy	
Burlington, Vt.	.....	.....	30.13	765.3	38	3.3	71	Calm	0	0	.....	.....	10s	.....	.....	0	0	Cloudy	
Cairo, Ill.	.....	.....	30.25	768.3	42	5.6	91	N	4	1.8	.....	.....	10s	.....	.....	0.01	0.3	Cloudy	
Cape Hatteras, N. C.	.....	.....	30.11	764.8	56	13.3	87	N	9	4.0	.....	10cs	Sm'k	SW	.....	0	0	Cloudy	
Cape Henry, Va.	.....	.....	30.18	766.6	46	7.8	84	NW	5	2.2	.....	.....	10s	.....	.....	0	0	Cloudy	
Cape Lookout, N. C.	.....	.....	30.20	767.1	52	11.1	93	Calm	0	0	.....	.....	10s	.....	.....	0	0	Cloudy	
Cape May, N. J.	.....	.....	30.16	766.1	36	2.2	100	N	4	1.8	.....	.....	Fog	.....	.....	0.04	1.0	Foggy	
Charleston, S. C.	.....	.....	30.23	767.8	57	13.9	87	SW	3	1.3	.....	2ck	5s	W	.....	0	0	Fair	
Cheyenne, Wyoming	24.09	611.9	30.03	762.7	27	— 2.8	77	SW	8	3.6	.....	0	0	.....	.....	0	0	Clear	
Chicago, Ill.	.....	.....	30.28	769.1	37	2.8	80	N	8	3.6	.....	0	8s	.....	N	0	0	Fair	
Cincinnati, Ohio	.....	.....	30.22	767.6	38	3.3	71	N	7	3.1	.....	.....	10s	.....	NE	0.09	2.3	Cloudy	
Cleveland, Ohio	.....	.....	30.28	769.1	32.5	0.3	93	NW	2	0.9	.....	.....	10s	.....	W	0.02	0.5	Cloudy	
Corsicana, Tex.	.....	.....	30.10	764.5	56	13.3	93	N	12	5.4	.....	.....	10s	.....	.....	1.05	26.7	Cloudy	
Davenport, Iowa	.....	.....	30.35	770.9	33	0.6	79	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Denison, Tex.	.....	.....	30.17	766.3	51	10.6	86	N	7	3.1	.....	.....	10s	.....	NE	0	0	Cloudy	
Denver, Col.	24.01	632.7	30.13	765.3	26	— 3.3	64	S	2	0.9	.....	0	0	.....	.....	0	0	Clear	
Detroit, Mich.	.....	.....	30.26	768 6	35	1.7	90	N	3	1.3	.....	.....	10s	.....	N	0	0	Cloudy	
Dodge City, Kan.	27.62	701.5	30.04	763.0	31	— 0.6	80	NW	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Dubuque, Iowa	.....	.....	30.38	771.6	25	— 3.9	88	Calm	0	0	.....	.....	10s	.....	.....	0	0	Cloudy	
Duluth, Minn.	.....	.....	30.32	770.1	30	— 1.1	78	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Eastport, Me.	.....	.....	30.05	763.3	28	— 2.2	77	N	5	2.2	.....	5k	2s	.....	N	Inap.	Inap.	Fair	
Erie, Pa.	.....	.....	30.21	767.3	37	2.8	90	Calm	0	0	.....	.....	Fog	.....	.....	Inap.	Inap.	Foggy	
Escanaba, Mich.	.....	.....	30.32	770.1	32	0.0	79	Calm	0	0	.....	.....	10s	.....	NW	0.01	0.3	Cloudy	
Fort Gibson, Indian Ter.	.....	.....	30.18	766.6	41	5.0	82	W	3	1.3	.....	0	2s	.....	.....	0	0	Clear	
Ft. St. Michael, Alaska	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Fort Sill, Indian Ter.	29.00	736.6	30.14	765.5	50	10.0	53	NW	8	3.6	.....	2ck	0	.....	.....	0	0	Fair	
Fort Sully, Dakota	28.47	723.1	30.23	767.8	27	— 2.8	88	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Florence, Arizona	28.53	724.6	30.07	763.8	53	11.7	.....	NW	.....	.....	.....	0	0	.....	.....	0	0	Clear	
Galveston, Tex.	.....	.....	30.11	764.8	59	15.0	94	W	8	3.6	.....	.....	10s	.....	NW	0.22	5.6	Cloudy	
Grand Haven, Mich.	.....	.....	30.33	770.4	31	— 0.6	84	N	6	2.7	.....	0	1s	.....	.....	0	0	Clear	
Indianapolis, Ind.	.....	.....	30.27	768.8	35	1.7	80	N	2	0.9	.....	.....	10s	.....	N	Inap.	Inap.	Cloudy	
Indianola, Tex.	.....	.....	30.18	766.6	57	13.9	87	NW	9	4.0	.....	0	0	.....	.....	0	0	Clear	
Jacksonville, Fla.	.....	.....	30.24	768.1	53	11.7	93	Calm	0	0	.....	5k	Fog	SW	.....	0	0	Foggy	
Keokuk, Iowa	.....	.....	30.27	768.8	32	0.0	80	N	7	3.1	.....	8c	0	N	.....	0	0	Fair	
Key West, Fla.	.....	.....	30.20	767.1	67	19.4	94	NE	8	3.6	.....	5cs	0	.....	.....	0	0	Fair	
Kittyhawk, N. C.	.....	.....	30.20	767.1	49	9.4	86	N	12	5.4	.....	.....	10s	.....	.....	0	0	Cloudy	
Knoxville, Tenn.	.....	.....	30.24	768.1	49	9.4	93	S	1	0.4	.....	.....	Fog	.....	.....	0.27	6.9	Dense fog	
La Crosse, Wis.	.....	.....	30.35	770.9	32	0.0	78	SW	1	0.4	.....	.....	10s	.....	.....	0	0	Cloudy	
Leavenworth, Kan.	.....	.....	30.27	768.8	32	0.0	68	NW	1	0.4	.....	.....	Fog	.....	.....	0	0	Foggy	
Louisville, Ky.	.....	.....	30.27	768.8	38	3.3	81	NW	4	1.8	.....	5c	Haz	.....	.....	0.13	3.3	Fair	
Lynchburg, Va.	.....	.....	30.19	766.8	46	7.8	85	Calm	0	0	.....	5c	Sm'k	W	.....	0	0	Fair	
Malone, N. Y.	.....	.....	30.10	764.5	38	3.3	80	Calm	0	0	.....	.....	10s	.....	.....	0	0	Cloudy	
Marquette, Mich.	.....	.....	30.26	768.6	36	2.2	70	W	6	2.7	.....	.....	10s	.....	.....	0	0	Cloudy	
Memphis, Tenn.	.....	.....	30.19	766.8	53	11.7	75	NE	9	4.0	.....	.....	10n	.....	NE	0.36	9.1	Heavy rain	
Milwaukee, Wis.	.....	.....	30.35	770.9	35	1.7	80	Calm	0	0	.....	.....	10s	.....	.....	0	0	Cloudy	
Mobile, Ala.	.....	.....	30.13	765.3	61	16.1	94	S	5	2.2	.....	.....	10s	.....	.....	0	0	Cloudy	
Montgomery, Ala.	.....	.....	30.20	767.1	58	14.4	81	NE	6	2.7	.....	.....	10n	.....	.....	Inap.	Inap.	Light rain	
Morgantown, W. Va.	29.10	739.1	30.17	766.3	44	6.7	84	Calm	0	0	.....	0	10s	.....	NW	0.28	7.1	Cloudy	
Mt. Washington, N. H.	23.64	600.4	30.00	762.0	22	— 5.6	100	NW	24	10.7	.....	.....	Fog	.....	.....	0	0	Foggy	
Nashville, Tenn.	.....	.....	30.20	767.1	49	9.4	93	Calm	0	0	.....	.....	10s, fg	.....	.....	.22	5.6	Cloudy	
New Haven, Conn.	.....	.....	30.10	764.5	37	2.8	90	N	5	2.2	.....	Haze	Fog	.....	.....	0.47	11.9	Fair	
New London, Conn.	.....	.....	30.10	764.5	39	3.9	81	Calm	0	0	.....	0	1s	.....	.....	0.47	11.9	Clear	
New Orleans, La.	.....	.....	30.08	764.0	63	17.2	91	S	8	3.6	.....	.....	10ks	.....	SW	0.28	7.1	Threatening	
Newport, R. I.	.....	.....	30.08	764.0	36	2.2	80	N	4	1.8	.....	0	9ks	.....	NW	0.46	11.7	Cloudy	
New York, N. Y.	.....	.....	30.14	765.5	40	4.4	82	NW	2	0.9	.....	.....	10s, fg	.....	.....	0.68	17.3	Cloudy	
Norfolk, Va.	.....	.....	30.20	767.1	51	10.6	78	Calm	0	0	.....	10s	Fog	.....	.....	0	0	Cloudy	
North Platte, Neb.	27.18	690.4	29.87	758.7	28	— 2.2	85	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Omaha, Neb.	29.14	740.1	30.27	768.8	33	0.6	75	N	1	0.4	.....	0	2s	.....	.....	0	0	Clear	
Oswego, N. Y.	.....	.....	30.18	766.6	36.5	2.7	85	Calm	0	0	.....	.....	10s	.....	NW	0	0	Cloudy	
Pembina, Dakota	.....	.....	30.18	766.6	13.5	—10.3	90	S	10	4.5	.....	0	5s	.....	S	0	0	Fair	
Philadelphia, Pa.	.....	.....	30.15	765.8	36	2.2	90	W	4	1.8	.....	8k	Fog	W	.....	0.16	4.1	Cloudy	
Pike's Peak, Col.	17.78	451.6	29.99	761.7	14.7	— 9.7	61	NE	30	13.4	.....	0	1s	.....	.....	0	0	Clear	
Pittsburgh, Pa.	.....	.....	30.17	766.3	39	3.9	91	NW	1	0.4	.....	10s	Fog	NW	.....	0.44	11.2	Cloudy	
Port Huron, Mich.	.....	.....	30.25	768.3	32	0.0	90	Calm	0	0	.....	.....	10s	.....	.....	Inap.	Inap.	Cloudy	
Portland, Me.	.....	.....	30.09	764.3	32	0.0	80	Calm	0	0	.....	.....	Fog	.....	.....	0	0	Dense fog	
Portland, Oregon	.....	.....	30.48	774.2	41	5.0	91	Calm	0	0	.....	.....	10s	.....	.....	0.61	15.5	Cloudy	
Punta Rassa, Fla.	.....	.....	30.23	767.8	62.5	16.9	88	NE	6	2.7	.....	2cs	0	SW	.....	0	0	Fair	
Rochester, N. Y.	.....	.....	30.16	766.1	35	1.7	82	W	4	1.8	.....	.....	10s	.....	NW	Inap.	Inap.	Cloudy	
Salt Lake City, Utah	25.91	658.1	30.24	768.1	28	— 2.2	88	W	8	3.6	.....	.....	10s	.....	.....	0	0	Cloudy	
Sandy Hook, N. J.	.....	.....	30.09	764.3	38	3.3	100	NW	4	1.8	.....	.....	Fog	.....	.....	0.51	13.0	Foggy	
San Diego, Cal.	.....	.....	30.11	764.8	53	11.7	86	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
San Francisco, Cal.	.....	.....	30.32	770.1	50	10.0	90	Calm	0	0	.....	0	0	.....	.....	0.01	0.3	Clear	
Santa Fé, N. M.	23.40	594.4	29.94	760.5	29	— 1.7	46	E	5	2.2	.....	0	0	.....	.....	0	0	Clear	
Savannah, Ga.	.....	.....	30.24	768.1	57	13.9	87	SW	2	0.9	.....	10ck	Sm'k	W	.....	0	0	Smoky	
Shreveport, La.	.....	.....	30.08	764.0	58	14.4	100	NW	8	3.6	.....	.....	10n	.....	.....	1.14	29.0	Light rain	
Smithville, N. C.	.....	.....	30.21	767.3	52	11.1	89	W	3	1.3	.....	2k	8ks	W	W	0	0	Cloudy	
Springfield, Mass.	.....	.....	30.12	765.0	36	2.2	90	Calm	0	0	.....	.....	Fog	.....	.....	0.40	10.2	Foggy	
St. Louis, Mo.	.....	.....	30.32	770.1	36	2.2	80	NE	4	1.8	.....	0	0	.....	.....	0	0	Clear	
St. Marks, Fla.	.....	.....	30.24	768.1	48	8.9	100	Calm	0	0	.....	5ck	Fog	W	.....	0	0	Fair	
St. Paul, Minn.	.....	.....	30.32	770.1	24	— 4.4	88	Calm	0	0	.....	0	1s	.....	.....	0	0	Clear	
St. Paul's Island, Alaska	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Thatcher's Island, Mass.	.....	.....	30.08	764.0	35	1.7	90	NW	4	1.8	.....	2c	2s	NW	NW	0	0	Fair	
Toledo, Ohio	.....	.....	30.26	768.6	39	3.9	74	Calm	0	0	.....	.....	10s	.....	W	0	0	Cloudy	
Tucson, Arizona	27.68	703.1	30.23	767.8	38	3.3	.....	S	.....	.....	.....	5c	0	W	.....	0	0	Fair	
Tybee Island, Ga.	.....	.....	30.32	770.1	54	12.2	86	SW	4	1.8	.....	5cs	2s	W	.....	0	0	Cloudy	
Vicksburg, Miss.	.....	.....	30.07	763.8	58.5	14.7	100	E	12	5.4	.....	.....	10n	.....	S	1.77	45.0	Light rain	
Virginia City, M. T.	24.46	619.8	29.88	758.9	30	— 1.1	89	SW	2	0.9	.....	.....	10n	.....	W	0.03	0.8	Light snow	
Washington, D. C.	.....	.....	30.18	766.6	39	3.9	91	W	2	0.9	.....	1cs	8s	.....	NW	0.08	2.0	Foggy	
Wilmington, N. C.	.....	.....	30.20	767.1	56	13.3	80	W	4	1.8	.....	10cs	Haze	W	.....	0	0	Cloudy	

UNITED STATES SERIES.—Continued.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Wood's Holl, Mass.	.....	.....	30.08	764.0	34	1.1	90	N	4	1.8	.....	.....	8s	.....	NW	0.67	17.0	Cloudy.....	
Yankton, Dakota	28.96	735.6	30.33	770.4	26	— 3.3	75	NE	2	0.9	.....	0	0	.....	.....	0	0	Clear.....	
Yuma, Arizona	.....	.....	30.15	765.8	61	16.1	.....	NW	.....	.....	.....	0	0	.....	.....	0	0	Clear.....	
Sub-Series.																			
Kingston, Jamaica, W. I.	.....	.....	30.26	768.6	73	22.8	81	Calm	0	0	.....	8c	2s	.....	.....	0	0	.....	James Gall.
Navassa, W. I.	.....	.....	.....	.....	76	24.4	.....	NE	.....	.....	3	.....	.....	.....	.....	0	0	.....	Dr. G. H. Davison.
Clifton, Ja., W. I.	27.26	692.4	30.06	763.5	64	17.8	83	N	1.0	0.4	.....	5c	2k	N	.....	0	0	Fine.....	C. Partridge.
Paramaribo, D. Guiana, S.A.	.....	.....	30.04	763.0	78	25.6	91	SE	.....	.....	2	0	5k	.....	.....	0	0	Clear.....	C. J. Hering.
Batavia, Dutch Guiana, S.A.	30.07	763.8	.....	.....	83 3	28.5	.....	N	.....	.....	.....	.....	.....	.....	.....	0	0	Cloudy.....	Dr. H. Groot.
Medellin, Colombia, S. A.	25.27	641 8	.....	.....	66.0	18.9	81	Calm	.....	.....	0	2k	4ks	.....	.....	0	0	Cloudy.....	Thomas Herran.
York Factory, B. A.	.....	.....	29.77	756.1	18.5	— 7.5	92	N	12	5.4	.....	.....	8s	.....	.....	0.66	1.5	Gloomy.....	J. Fortescue, W. Wood
Honolulu, Oahu, H. I.	.....	.....	30.11	764.8	70	21.1	95	NE	.....	.....	2	.....	.....	.....	.....	0	0	Squally.....	Daniel Smith.
Makawao, Maui, H. I.	.....	.....	30.04	763.0	62	16.7	77	NE	.....	.....	1	0	10n	.....	.....	1.30	33.0	.....	F. L. Clarke.

Note.—The originals give the amount of cloudiness by the scale 0 to 4, except York Factory, Makawao, Medellin and Paramaribo. The elevation of the barometer at Bismarck is 1,677 feet, or 511.1 meters; Cheyenne, 6,057.8 ft., or 1,846.2 m.; Clifton, also at 2,892 ft. or 881.5 m.; Denver, 5,135 ft., or 1,565.2 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Florence, 1,550 (?) ft. or 472.5 (?) m.; Makawao, 2,205 ft., or 672.1 m.; Morgantown, 1,027.9 ft., or 313.3 m.; Medellin, 4,876 ft., or 1,486.2 m.; Mt. Washington, 6,285 ft., or 1,915.6 m.; North Platte, 2,846 ft., or 867.4 m.; Omaha, 1,054.6 ft., or 321.4 m.; Pike's Peak, 14,150.7 ft., or 4,313.1 m.; Salt Lake City, 4,362.2 ft., or 1,329.6 m.; Santa Fé, 6,862.2 (?) ft., or 2,091.6 (?) m.; Tucson, 2,513 (?) ft., or 772.1 (?) m.; Virginia City, 5,480 (?) ft., or 1,670.3 (?) m.; Yankton, 1,278 ft., or 389.5 m. The following constants are added in correcting the barometric observations for altitude: Cheyenne, 5.04 inches; Denver, 5.22 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fé, 6.54 in.; Tucson, 2.59 in.; Virginia City, 5.48 in. The elevation of Batavia is about 6 feet; the barometric readings need the addition of 0.2 mm. or 0.01 in. for reduction to sea-level.

UNITED STATES NAVAL SERIES.

By authority of the **SECRETARY OF THE NAVY.**

Furnished by the coöperation of the Navy Department, through Commodore Daniel Ammen, U. S. N., Chief of Bureau of Navigation.

STATIONS AND VESSELS.	True course toward—	Hourly rate in knots.	*Barometer as reported.		Temperature of the Air.		Relative Humidity.	Wind.				Clouds.				Rain-fall or melted snow in the past 24 hours.		State of Ocean.	Direction of swell from—	Weather.	OBSERVER.
								Direction.	Velocity		Force.	Amount.		Direction.							
												Up'er	Low'r	Up'er	Low'r						
			Inches.	Millimeters.	Fahrenheit.	Centigrade.	Per cent.	From—	Miles per hour.	Meters per second.	0—10.	0—10.	0—10.	From—	From—	Inches.	Millimeters.				
Naval Academy, Annapolis, Md.			29.78	756.4	40	4.4	.....	Calm	.....	.....	0	.....	10	.....	.....	0	0	.....	.....	Cloudy	
Naval Hospital, Annapolis, Md.			30.18	766.6	37	2.8	90	Calm	.....	.....	0	.....	8	.....	W	0.12	3.0	.....	.....	Foggy	
Navy Yard, Mare Island, Cal.			30.37	771.4	59	15.0	100	Calm	.....	.....	0	.....	0	.....	.....	0.007	0.18	.....	.....	Pleasant	
Navy Yard, Norfolk, Va.			30.30†	769.6†	46	7.8	100	SW	.....	.....	2	.....	9ks	.....	.....	.....	.....	.....	.....	‡D. clouds	
Navy Yard, Pensacola, Fla.			30.25	768.3	63.5	17.5	92	E	.....	.....	1	.....	.....	.....	.....	0	0	.....	.....	Dense fog	
Navy Yard, Portsmouth, N.H.			30.06	763.5	32	0.0	.....	NE	.....	.....	1	.....	Fog	.....	.....	.....	.....	.....	.....	Foggy	
¶ Canonicus, New Orleans, La.			29.84†	757.9†	62	16.7	94	SSE	.....	.....	3	.....	10	.....	W	.....	.....	.....	.....	Misty	
Colorado, New York, N. Y.			30.21	767.3	39	3.9	.....	WNW	.....	.....	3	.....	10	.....	.....	0.438	11.12	.....	.....	Foggy	
Essex, Hampton Roads, Va.			30.19	766.8	51	10.6	.....	Calm	.....	.....	0	.....	10	.....	.....	.....	.....	.....	.....	Overcast	
Hartford, Norfolk Va.			30.30	769.6	48	8.9	.....	S	.....	.....	1	.....	10	.....	.....	0	0	.....	.....	Overcast	
Michigan, Erie, Pa.			30.13	765.3	35	1.7	70	SW	.....	.....	1	.....	10	.....	S	.....	.....	.....	.....	Cloudy	
Monongahela, Baltimore, Md.			30.16	766.1	38	3.3	.....	Calm	.....	.....	0	.....	Fog	.....	.....	Blank	Blank	.....	.....	Dense fog	
New Hampshire, Port Royal, S. C.			30.44	773.2	58	14.4	.....	Calm	.....	.....	0	.....	0	.....	.....	.....	.....	Smooth	.....	Blue sky	
Omaha, Panama.			30.07	763.8	74	23.3	95	NW	.....	.....	1	.....	0	.....	.....	0	0	Smooth	.....	Pleasant	
Ossipee, New Orleans, La.			30.14	765.5	62	16.7	.....	SSE	.....	.....	2	.....	10	.....	S	.....	.....	.....	.....	‡D. clouds	
Pensacola, Panama.			30.07	763.8	76	24.4	91	NNW	.....	.....	1	.....	1	.....	.....	0.2	5.1	.....	.....	‡D. clouds	
Plymouth, Pensacola, Fla.			30.21	767.3	65	18.3	89	E	.....	.....	3	.....	10	.....	N&E	.....	.....	Smooth	.....	Foggy	
¶ Rio Bravo, Matamoras, Mex.			29.99	761.7	58	14.4	94	NW	.....	.....	1	.....	4	.....	NE	.....	.....	.....	.....	‡D. clouds	
Santee, Annapolis, Md.			29.76†	755.9†	38	3.3	90	Calm	.....	.....	0	.....	10	.....	.....	.....	.....	.....	.....	Foggy	
St. Louis, League Island, Pa.			30.01	762.2	34.6	1.4	.....	SW	.....	.....	2	.....	9	.....	SE	0.09	2.3	.....	.....	Cloudy	
Vandalia, Constantinople, Turkey.			30.00	762 0	45	7.2	92	N	.....	.....	4	.....	10	.....	S	.....	.....	.....	.....	Raining	
Wabash, Boston, Mass.			30.14	765.5	35	1.7	.....	NW	.....	.....	1	.....	7	.....	SE	.....	.....	.....	.....	Hazy	
Wyoming, Washington, D.C.			30.17	766.3	56	13.3	.....	Calm	.....	.....	0	.....	8	.....	.....	.....	.....	.....	.....	Hazy	

* It is not known that the barometer is corrected for temperature, instrumental error or elevation. † Aneroid Barometer. ‡ Detached clouds. ¶ Barometer corrected for instrumental error and reduced to sea-level.

UNITED STATES MARINE SERIES.

REPORTED TO THE OFFICE OF THE CHIEF SIGNAL OFFICER OF THE ARMY.

NAMES OF VESSELS.	True course toward—	Hourly rate in knots.	Barometer reduced to sea-level.		Temperature of the Air.		Relative Humidity.	Wind.				Clouds.						State of Ocean.	Direction of swell from—	Weather.	OBSERVER.
								Direction.	Velocity.		Force.	Amount.		Direction.							
												Up'er	Low'r	Upper.	Lower.						
			Inches.	Millimeters.	Fahrenheit.	Centigrade.	Per cent.	From—	Miles per hour.	Meters per second.	0—10.	0—10.	0—10.	From—	From—						
PACIFIC MAIL S. S. CO. MARINE SERIES. Furnished by the coöperation of ————, President; Williams, Blanchard & Co., Agents.																					
S. S. City of Peking																					Lt. Z. L. Tanner, U.S.N
OCCIDENTAL AND ORIENTAL S. S. CO. MARINE SERIES. Furnished by the coöperation of George H. Bradbury, President; T. H. Goodman, Agent.																					
S. S. Belgic																					Capt. John Metcalf.
S. S. Gaelic																					Capt. W. H. Kidley.
S. S. Oceanic																					Capt. H. Parsell.
NORTH GERMAN LLOYD OF BREMEN MARINE SERIES. Furnished by the coöperation of A. Schumacher & Co., Agents.																					
S. S. Baltimore																					Capt. H. Andressen.
S. S. Berlin																					Capt. C. Pohle.
S. S. Braunschweig																					Capt. K. Undütsch.
S. S. Nürnberg																					Capt. A. Jaeger.
S. S. Ohio																					Capt. G. Meyer.
MARINE SERIES. (Miscellaneous.) Furnished by the coöperation of Captain James Jorgensen.																					
Schooner Addie Fuller, at Brunswick, Ga.			30.19	766.8	64	17.8	83	Calm	0	0		5ck	0	W						Detached clouds.	Capt. James Jorgensen

NOTE.—The schooner Addie Fuller gives the amount of cloudiness by the scale 0 to 4.

COLLATED AT THE OFFICE OF THE CHIEF SIGNAL OFFICER OF THE ARMY, WASHINGTON, D. C.

The records which appear in this Bulletin are copied from the regular exchanges of this office, made in each instance in compliance with an especial request and are published for the uses of the coöperating observers. The barometric readings in the first two columns are reduced to freezing and their respective standards; those in the second two also to mean sea-level. The "weather" is generally published as given.

When the distinction between the upper and lower strata of clouds is not reported, the *kinds* or *types*, viz: cirrus, cumulus, stratus, nimbus, scud, fracto, pallio, haze, fog and smoke, as indicated, respectively, by the letters c, k, s, n, d, f, p, hz., fg. and sm'e, are generally published with the amount in the lower-cloud column. The distinction between the upper and lower strata is carefully made in the United States Series and a portion of the Canadian Series, and the types are indicated by the above letters or their combinations in the proper column.

Albert J. Myer

Brig. Gen. (Bvt. Assg'l,) Chief Signal Officer, U. S. A.

BULLETIN

OF

INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON FEBRUARY 4, 1877.

7:35 A. M. WASHINGTON mean time.

6:7 A. M. MEXICO mean time.
7:7 A. M. SAN JOSE mean time.
0:6 P. M. LISBON mean time.
0:28 P. M. MADRID mean time.
0:43 P. M. GREENWICH mean time.
0:53 P. M. PARIS mean time.
1:1 P. M. BRUSSELS mean time.
1:4 P. M. UTRECHT mean time.
1:13 P. M. BERNE mean time.

10:2 P. M. TOKEI mean time.

1:26 P. M. CHRISTIANIA mean time.
1:33 P. M. COPENHAGEN mean time.
1:33 P. M. ROME mean time.
1:37 P. M. BERLIN mean time.
1:49 P. M. VIENNA mean time.
1:55 P. M. STOCKHOLM mean time.
2:18 P. M. ATHENS mean time.
2:39 P. M. CONSTANTINOPLE mean time.
2:44 P. M. ST. PETERSBURG mean time.

ALGERIAN SERIES.

Furnished by the coöperation of General d'Eudeville, Commandant Supérieur du Génie in Algeria.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Nemours			30.43	772.9	61.2	19.0		SSE			2		2			0	0	Clear	Michel.
Algiers			30.41	772.5	60.6	15.9		SW			1		1			0	0	Clear	Biscarrat.
La Calle			30.31	769.9	55.4	13.0		W			3		7			0.276	7.0	Cloudy	Fleury.
Tunis			30.32	770.2	55.6	13.1		W			3		1			0	0	Clear	Jacques.
Sfax																			
Saida			30.35	771.0	62 6	17.0		ESE			1		1			0	0	Clear	Millot.
Tebessa			30.28	769.2	41 0	5.0		W			3		6			0.079	2.0	Fair	Bourgeois.
Gerlville			30.26	768.6	44.6	7.0		N			3		1			0	0	Clear	Lemaillot.
Laghouat			30.31	769.9	62.6	17.0		S			1		1			0	0	Clear	Guyot.
Biskra			30.41	772.5	69.8	21.0		NW			3		5			0	0	Fair	Kuntz.

NOTE.—In the originals the distinction between the amount of upper and lower clouds is apparently not made. The weather is published as given. The rain-fall is measured at 7 a. m., local time.

AUSTRIAN SERIES.

Furnished by the cooperation of Professor Ferdinand Osnaghi, Director of the Imperial and Royal Central Meteorological Institute at Vienna.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Agram			30.31	769.8	37.0	2.8	56	SW			1		6			0.012	0.3		Prof. Ivan Stozir.
Cracow, I. R. Observatory			30.24	768.1	27.0	— 2.8	100	NE			1		10			0	0		Dr. Wierzbiski.
Eperies			30.26	768.6	29.8	— 1.2	71	Calm			0		6c,s			0	0		Julius Mikolik.
Gratz			30.27	768.8	34.9	1.6	71	S			2		10			0	0		Andreas Rospini.
Hermannstadt	28.96	735 6	30.27	768.8	34.9	1.6	71	S			2		10			0	0		Prof. Reissenberger
Kremsmünster	28.80	731 6	30.31	769.9	31.1	— 0.5	77	SSW			1		10			0	0		Prof. C. Wagner.
Lemberg	28.84	732.5	30.24	768.2	34.9	1.6	96	Calm			0		10			0.039	1.0		Dr. T. Stanecki.
Nyiregyhaza			30.22	767.5	23.7	— 4.6	90	SE			1		6			0	0		Habzsuda Daniel.
Pola																			I.R.Hydrographic Office.
Szegedin			30.23	767.8	44.4	6.9	63	WNW			3		9s			0	0		Karl Stancel.
Trieste			30.31	769.9	27.1	— 2.7	83	Calm			0		6			0	0		Prof. V. Faroifi.
Vienna			30.28	769.2	44.6	7.0	71	Calm			0		10			0	0	Cloudy	I. R. Central Met. Obs'y.
			30.26	768.5	30.6	— 0.8	90	Calm			0		10			0.020	0.5		

NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 7 p. m., local time. The elevation of Gratz is 343.5 meters, or 1,126.9 feet; Hermannstadt, 407.8 meters, or 1,337.9 feet; Kremsmünster, 383.6 meters, or 1,258.5 feet.

BELGIAN SERIES.

Furnished by the coöperation of J. C. Houzeau, Director of the Royal Observatory at Brussels.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Arlon			30.19	766.8	39.4	4.1	98	W			4		10			0.283	7.2		
Brussels			30.11	764.8	44.8	7.1	81	W			4		10n		NW	0.130	3.30	Rain, graupel	Royal Observatory.
Furnes			30.12	765 0	44.2	6.8	69	NW			4		5			0.039	1.0		
Maeseyck			30.10	764.5	45.7	7.6	83	WSW			6		10			0.063	1 6	Raining	

NOTE.—In the originals, the weather is occasionally given in general notes.

BRITISH SERIES

Furnished by the cooperation of Robert H. Scott, Esq., Director of the Meteorological Office, London, Alexander Buchan, Secretary of the Scottish Meteorological Society, Edinburgh, and the respective Observers.

STATIONS.	Barometer. Corrected for instru'tal error and temperature. Inches.	Barometer. Corrected for instru'tal error and temperature. Millimeters.	Reduced to sea-level. Inches.	Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Aberdeen			29.91	759.7	40.6	4.8		W	17	7.6			0			0	0	Blue sky	William Boswell.
Ardrossan																			William McNeil.
Armagh, Observatory			30.16	766.1	42.2	5.7		SW	13	5.8									S. Call, for Dr. Robinson.
Bidston (Liverpool Obs.)			30.14	765.5	43.2	6.2		W	40	17.9			2					Blue sky	John Hartnup.
Birr Castle, (Parsonstown)			30.24	768.1	44.7	7.1		SW			1		8					*D. clouds	J. Dreyer.
Bradford																0.33	8.4		J. McLandsborough.
Bridgetown, (Barbados)			30.06	763.5	81.0	27.2		NE			3		7					Overcast	Sergt. J. F. Halanen, A.
Cambridge, Observatory			30.15	765.8	46.0	7.8		WNW			2-3		1					*D. clouds	H. Todd. [H.C.
Cardington			30.18	766.6	45.0	7.2		NW			3		3					*D. clouds	John McLaren.
Carlisle																			T. Bell, for J. Cartmell.
Chatham, School M. E.			30.21	767.3	44.3	6.8		NW			2		3					Blue sky	Capt. Fellows, R. E.
Dartmoor	28.83	732.3	30.38	771.6	42.4	5.8		N			6		5					*D. clouds	R. E. Power.
Davos Platz, (Switzerland)	24.96	634.0			31.4	— 0.3	53	E			1		5			0.178	4.5	*D. clouds	Francis Redford, M. A.
Donaghadee			30.10	764.5	43	6.1		WNW			3		0					Blue sky	J. Mac Gowan.
Dover			30.17	766.3	44	6.7		WNW			2		4					½ clouded	J. Costello.
Eccles, (near Manchester)			30.12	765.0	45.9	7.7		W	7.8	3.5			7					Squally	Thomas Mackereth.
Falmouth, Observatory			30.36	771.1	46.9	8.3		WNW			4		2					*D. clouds	The Staff.
Fort Napier, (Natal)	27.46	697.5	29.70	754.4	72.3	22.4		N			3		1					*D. clouds	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.95	760 7	85	29.4		NE			1		3					*D. clouds	
Galway, Queen's College			30.17	766.3	46	7.8		W			6		4					*D. clouds	Prof. A. H. Curtis.
Gibraltar, (Mediterranean)			30.37	771.4	62.5	16.9		E			2		1					Blue sky	Corpl. C. Aitken, A.H.C.
Glasgow, Observatory			30.01	762.2	40.8	4.9		WSW			2		1					Blue sky	Lewis Stuart.
Great Yarmouth			30.08	764.0	43	6.1		WNW			4		2					Hazy	G. T. Watson.
Greenwich, Royal Obs'y			30.20	767.1	44.3	6.8		WNW			3		8			Blank	Blank	*D. clouds	The Staff, for G. B. Airy.
Guernsey			30.32	770.1	47	8.3		WNW			4		3					*D. clouds	Dr. S. E. Hoskins.
Helston			30.46	773.7	48	8.9		NW			0		1c			0.16	4.1	*D. clouds	M. P. Moyle.
Holyhead			30.20	767.1	45	7.2		W			4		2					Blue sky	John Tilston.
Kew, Observatory			30.20	767.1	44.5	6.9		WSW	18	8.0			4					*D. clouds	The Staff.
Kingstown			30.21	767.3	44	6.7		WNW			4		1					Blue sky	George Mitchell.
Leicester Museum			30.15	765.8	44.0	6.7		W			2		3					*D. clouds	Wm. J. Harrison, F.G.S.
Malta, (Mediterranean)			30.11	764.8	56.4	13.6		NW			2		6k					*D. clouds	Corp'l. P. Bravis, A.H.C.
Nairn			29.90	759.4	39	3.9		WSW			1		0					Clear	W. D. Penny.
Nassau, (Bahamas)			30.22	767.6	73.0	22.8		NE			1		9					Overcast	Surg. Maj. Henry.
Nottingham, Observatory			30.14	765.5	44.9	7.2		WSW			4		3k		W	0	0	*D. clouds	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			30.16	766.1	41.0	6.7		W			4		6					*D. clouds	Rev. Stephen Whitty.
Oxford, Radcliffe Obs'y			30.19	766.8	44	6.7		W			4		2					Blue sky	J. Lucas.
Plymouth			30.32	770.1	48.0	8.9		NW			4		2					*D. clouds	John Merrifield.
Roche's Point			30.29	769.4	46	7.8		W			3		5					Lightning	W. Kennedy.
Saint Ann's Head																			John C. Walker.
Saint Helier, (Jersey)			30.33	770.4	50.2	10.1		NNW			4		2					¾ clouded	A. P. Amy.
Sandwick Manse, (Orkney)			29.68	753.9	41.9	5.5		WNW	28	12.5			2					*D. clouds	Rev. C. Clouston, LL. D.
Scarborough																			F. Shaw.
Scutari Cemetery, (Turkey)			30.16	766.1	39.5	4.0		NE			2		10					Drizzling	Sergt. W. H. Lyne.
Sheffield			30.11	764.8	43.0	6.1		W			3		5k			0	0	*D. clouds	W. F. Cooper.
Silloth Rectory			30.08	764.0	43.7	6.5	79	NW			3		0			0.09	2.25	Blue sky	Rev. Francis Redford.
Stonyhurst, Observatory			30.13	765.3	41.5	5.3		W			4		10			Blank	1 ml	Misty	Rev. S. J. Perry.
Stornoway, Lewis C., (Hebr.)			29.83	757.7	40	4.4		W			3		2					Blue sky	John Smith.
Stratfield Turgiss			30.32	767.6	45.2	7.3		NW			1		0					Blue sky	Rev. Charles H. Griffith.
Thurso			29.77	756.1	41	5.0		WNW			5		5					*D. clouds	John Trotter.
Truro, Royal Institution			30.34	770.6	51	10.6		NW			6		3					*D. clouds	W. Newcombe.
Valencia, Observatory			30.30	769.6	46.5	8.1		W	18	8.0			7					*D. clouds	The Staff.
SUB-SERIES.																			
Calf of Man, (Isle of Man)																			Henry Mercer.
Cape Good Hope, Obs'y			30.02	762.5	68.8	20.4	65	NW	2	0.9		6	10						The Staff, for E. J. Stone.
Hobart Town, (Tasmania)			30.31	769.9	67.0	19.4	94	S			1		10n			0	0	Covered	Francis Abbott, F.R.A.S.
Leith, Restalrig Park			30.04	763.0	41.9	5.5		W			2					0.17	4.3	Fine	Andrew Gibb.
Mauritius, Observatory			29.82	757.4				NNE	5.3	2.4						0.44	11.2		C. Meldrum.
Melbourne, Observatory			30.20	767.1	61.2	16.2	70	SE	4	1.8			5			0	0	Dense haze	R. L. J. Ellery.
Monach L't-house, (Hebrides)																			J. Youngclause.
North Unst, (Shetland Is.)			29.56	750.8	39	3.9		NW			8	5	5	NW		Blank	Blank		Robert Burnet.

NOTE.—Generally, the originals do not give the relative humidity, rain-fall, or distinction between upper and lower clouds. The originals give the wind direction to 32 points and weather by the Beaufort notation. The originals give the barometer for Aberdeen, Cardington, Galway, Oxford, St. Helier, Sandwick, Scarborough, Stonyhurst, Leith, Monach and North Unst as read off and the amount of cloudiness for Stornoway by the scale 0 to 4. The wind-force is given by the scale 0 to 12 in the official series; 0 to 6 in the sub series; except in lbs. per square foot for Greenwich and Hobart Town. The rain-fall is measured at Aberdeen at 10 a. m.; Bradford, 9 a. m.; Hobart Town, 7:30 a. m.; Nottingham, 6 p. m.; Mauritius, 9 a. m., local time. The elevation of Dartmoor is 1,400 feet, or 426.7 metres; Davos Platz, 5,1652 feet, or 1,556.02 meters; Fort Napier, 2,200 feet, or 670.6 meters. *Detached clouds.

COSTA RICA SERIES.

By authority of the Minister of Foreign Affairs.

Furnished by the coöperation of Senor Federico Maison, Director of the Central Office of Statistics and Meteorology.

STATIONS.																				
San José																				

DANISH SERIES.

Furnished by the coöperation of Captain N. Hoffmeyer, Director of the Royal Danish Meteorological Institute at Copenhagen.

STATIONS.																				
Copenhagen			29.86	758.4	35.2	1.8	96	W			2		10					Foggy		
Fanöe			29.88	758.9	38.3	3.5	83	WSW			4		1							
Godthaab, (Greenland)			29.27	743.4	18.0	— 7.8	100	S			7		10					Snowing		
Stykkisholm, (Iceland)			29.04	737.5	29.3	— 1.5	98	W			8		10							
Thorshavn, (Faröe)			29.48	748.7	39.4	4.1	63	W			4		7							
Vestervig			29.78	756.3	37.8	3.2	93	WSW			4		4							

NOTE.—The originals give the wind-force by the scale 0 to 6; occasionally, weather by Vienna symbols; no distinction between the amount of upper and lower clouds.

FRENCH SERIES.

Furnished by the co-operation of His Excellency, U. J. Le Verrier, Director of the Paris Observatory, and the respective Observers.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Alengon	.....	.....	30.30	769.7	48.2	9	87	NW	.....	.....	2	.....	5kn	.....	NW	0	0	Cloudy	Normal School.
Amiens	.....	.....	30.33	770.4	45.3	7.4	81	ENE	.....	.....	3	.....	5	.....	NE	0	0	Cloudy	Normal School.
Avignon	.....	.....	30.33	770.4	52.2	11.2	43	NNW	.....	.....	6	.....	0	.....	.....	0	0	Very clear	Normal School.
Bar-sur-Seine	.....	.....	30.27	768.9	44.4	6.9	91	SW	.....	.....	1	.....	10	.....	W	0.020	0.5	Sprinkling	C. Saillard.
Beaumette, (near Angers)	.....	.....	30.32	770.1	51.6	10.9	60	W	11.0	4.9	.....	.....	.....	.....	W	0	0	.....	Beaumette Observ'tory.
Beauvais	.....	.....	30.24	768.1	45.7	7.6	77	WNW	.....	.....	3	.....	10	.....	WNW	0	0	Covered	Normal School.
Besançon	.....	.....	30.38	771.7	44.8	7.1	71	S	.....	.....	3	.....	8	.....	SW	0.055	1.4	Very cloudy	Normal School.
Bourg en Bresse	.....	.....	30.49	774.5	44.8	7.1	74	SW	.....	.....	2	.....	8n	.....	NE	0	0	Very cloudy	Normal School.
Bourges	.....	.....	30.38	771.7	48.7	9.3	79	WSW	.....	.....	4	.....	5	.....	WSW	0	0	Cloudy	Normal School.
Brest	.....	.....	30.36	770.8	50.2	10.1	71	N	.....	.....	3	.....	5	.....	WNW	0.157	4.00	Squally	Naval Observatory.
Carcassonne	.....	.....	30.48	774.2	50.7	10.4	74	W	.....	.....	1	.....	5	.....	E	0	0	Cloudy	Normal School.
Caen	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Chartres	.....	.....	30.24	768.0	47.3	8.5	89	WNW	.....	.....	4	.....	8	.....	E	0	0	.....	Normal School.
Châlons-sur-Marne	.....	.....	30.22	767.5	46.0	7.8	89	W	.....	.....	3	.....	10	.....	.....	0.004	0.1	Light rain	Normal School.
Clermont	.....	.....	30.37	771.4	47.8	8.8	67	W	.....	.....	2	.....	5	.....	W	0	0	.....	Puy de Dome Obs'y.
Commercy	.....	.....	30.26	768 7	41.9	5.5	95	WSW	.....	.....	4	.....	8n	.....	WSW	0	0	Very cloudy	Normal School.
Commune de Gréasque*	.....	.....	30.28	769.0	48.0	8.9	50	NW	.....	.....	4	.....	2	.....	NW	0	0	.....	M. Kina.
Grenoble	.....	.....	30.38	771.6	45.5	7.5	63	NW	.....	.....	4	.....	8k	.....	SSW	0	0	Very cloudy	Normal School.
La Roche-sur-Yon	.....	.....	30.40	772.1	49.6	9.8	86	S	.....	.....	2	.....	8	.....	W	0.047	1.2	Very cloudy	Normal School.
Le Mans	.....	.....	30.33	770.3	48.6	9.2	79	NW	.....	.....	4	.....	5	.....	NW	0.010	0.25	Cloudy	Normal School.
Lons-Le-Saulnier	.....	.....	30.39	772.0	45.1	7.3	74	W	.....	.....	1	.....	10	.....	.....	0	0	Covered	Normal School.
Lorient	.....	.....	30.39	772.0	45.1	7.3	74	W	.....	.....	3	.....	5	.....	NW	0	0	Cloudy	Naval Observatory.
Mâcon	.....	.....	30.42	772.6	52.5	11.4	52	NW	.....	.....	1	.....	10	.....	.....	0	0	Covered	Normal School.
Metz	.....	.....	30.44	773.2	45.9	7.7	91	S	.....	.....	2	.....	10	.....	.....	0	0	Covered	M. Schuster.
Mirecourt	.....	.....	30.27	768.9	41.2	5.1	99	SW	.....	.....	2	.....	10	.....	.....	0	0	Covered	Normal School.
Nismes	.....	.....	30.27	768.8	40.8	4.9	94	SSW	.....	.....	2	.....	10	.....	NNE	0	0	.....	Normal School.
Orleans	.....	.....	30.33	770.4	54.0	12.2	50	Calm	.....	.....	0	.....	.....	.....	.....	0	0	.....	Normal School.
Paris, Observatory	.....	.....	30.25	768.4	45.3	7.4	85	.....	.....	.....	2	.....	8	.....	.....	0	0	Very cloudy	National Observatory.
Parthenay	.....	.....	30.24	768.1	45.5	7.5	81	WSW	.....	.....	2	.....	9kn	.....	W	0	0	Almost cov'd	Normal School.
Privas	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Rochefort, Observatory	.....	.....	30.38	771.6	46 9	8,3	.....	NW	.....	.....	2	.....	2	.....	N	0	0	Slightly cl'dy	Naval Observatory.
Rouen	.....	.....	30.44	773.1	54.7	12.6	79	SW	.....	.....	4	.....	5	.....	NE	0	0	¾ covered	Normal School.
Saint Lo	.....	.....	30.32	770.0	44.1	6.7	79	N	.....	.....	3	.....	2	.....	SW	0.51	1.3	Slightly cl'dy	Normal School.
Tarbes	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Villefranche	29.32	744.7	30.43	772.8	50.9	10.5	74	W	.....	.....	2	.....	2	.....	E	0	0	Slightly cl'dy	Normal School.
	.....	.....	30.43	773.0	48.2	9	91	W	.....	.....	1	.....	8	.....	.....	0	0	Very cloudy	Normal School.
SUB-SERIES.																			
Fort de France, Martinique	.....	.....	29.95	760.7	75.6	24.2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	L'Abbé Marchési.
Marseilles	.....	.....	30.25	768.3	51.8	11.0	44	NW	.....	.....	3	.....	3	.....	.....	0	0	Partly cl'dy	Marseilles Observatory.
Mont-Louis	.....	.....	30.30	771.9	32.9	0.5	76	NNW	26.1	11.67	.....	.....	0	.....	.....	0	0	.....	—. Falguère.
Montsouris, Paris	25.08	636.9	30.24	768.1	45.5	7.5	85	SW	.....	.....	4	.....	.....	.....	WSW	0.012	0.3	.....	Montsouris Observatory
Perpignan	.....	.....	30.40	772.2	54.0	12.2	52	NW	26.1	11.67	.....	.....	1	.....	NW	0	0	.....	Dr. Fines.
Pic du Midi, (Summit,) H. P.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. Baylac.
Pic du Midi, (Plantade,) H. P.	22.66	575.6	.....	.....	25.9	— 3.4	.....	N	.....	.....	1	.....	0	.....	.....	0	0	Clear	General de Nansouty.
Saint Maur, (near Paris)	.....	.....	30.23	767.9	45.1	7.3	90	WSW	.....	.....	1	.....	9	.....	.....	.....	.....	Cloudy	E. Renou.
Toulouse	.....	.....	30.51	774.9	47.7	8.7	75	NNW	.....	.....	2	.....	10	.....	.....	.....	.....	Light rain	Toulouse Observatory.
Tours	.....	.....	30.32	770.2	51.3	10.7	98	W	.....	.....	3	.....	8	.....	WNW	0	0	.....	C. Marquet.
Versailles, (near Paris)	.....	.....	30.23	767.8	46.8	8.2	81	WNW	.....	.....	3	.....	4	.....	.....	0.183	4.65	Fair	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai)	.....	.....	30.24	768.0	37.6	3.1	84	N	5.6	2.50	.....	.....	10	.....	.....	0.209	5.3	Rainy	Marc Dechevrens, S. J.
	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

NOTE.—Generally, the originals give the wind-force by the scale 0 to 7; no distinction between upper and lower clouds, and, in the official series, the amount by the scale 0 to 4 the rain-fall as measured at 7, 8 or 9 a. m., local time; at Clermont, 9 a. m. of the following day; the weather in general terms as published. The elevation of Clermont is 388 meters, or 1,272.9 feet; Commune de Gréasque, 322 meters, or 1,056.4 feet; Tarbes, 308 meters, or 1,010 feet; Mont-Louis, 1,580.40 meters, or 5,204.8 feet; Pic du Midi, (Summit,) 2,877 meters, or 9,439.1 feet; Pic du Midi, (Plantade,) 2,366 meters, or 7,762.6 feet. In correcting the Mont-Louis barometric observations for altitude, the constant 135. millimeters has been added. * Bouches-du-Rhône

GERMAN SERIES.

Furnished by the coöperation of Professor Dr. G. Neumayer, Director of the German Naval Observatory, Hamburg.

Bamberg	.....	.....	30.15	765.9	39.2	4.0	84	SW	.....	.....	1	.....	7	SW	.....	0	0	.....	Prof. T. Hoh.
Berlin	.....	.....	30.10	764.6	38.5	3.6	83	SW	.....	.....	1	.....	8	.....	.....	0.004	0.1	.....	Prof. Arndt.
Breslau	.....	.....	30.18	766.5	35.6	2.0	64	SW	.....	.....	2	.....	7	.....	.....	0	0	.....	Royal University Obs'y.
Carlsruhe	.....	.....	30.19	766.9	45.0	7.2	74	SW	.....	.....	5	.....	10	.....	.....	0.264	6.7	.....	A. Senz.
Cassel	.....	.....	30.10	764.6	39.7	4.3	88	S	.....	.....	2	.....	10	WSW	.....	0	0	.....	Dr. H. Möhl.
Crefeld	.....	.....	30.04	763.1	46.9	8.3	80	W	.....	.....	3	.....	9	.....	.....	0.08	2.	.....	Director Lose.
Emden	.....	.....	30.11	764.7	43.5	6.4	82	NW	.....	.....	3	.....	8	.....	.....	0.134	3.4	.....	Prof. Prestel.
Frankfort on the Main	.....	.....	30.28	769.0	41.7	5.4	89	SSW	.....	.....	2	.....	10	.....	.....	0.031	0.8	Raining	Physical Society.
Friedrichshafen	28.84	732.4	30.32	770.1	42.8	6.0	75	SW	.....	.....	5	.....	9	.....	.....	0.236	6.0	Raining	M. Wilhelm.
Hamburg	.....	.....	29.97	761.3	39.6	4.2	97	WSW	.....	.....	3	.....	10	.....	.....	0.134	3.4	Covered	Captain F. Hegemann.
Kiel	.....	.....	29.92	759.9	39.7	4 3	96	W	.....	.....	3	.....	10	.....	.....	0.138	3.5	.....	Prof. G. Karsten.
Königsberg, (Prussia)	.....	.....	30.08	764.0	31.8	— 0.1	80	S	.....	.....	2	.....	5	.....	.....	0.004	0.1	.....	Prof. E. Luther.
Köslin	.....	.....	30.04	763.1	33.1	0.6	.....	S	.....	.....	3	.....	10	.....	.....	0	0	.....	H. Müller.
Leipsic	.....	.....	30.12	765.1	38.5	3.6	88	SW	.....	.....	3	.....	8	.....	.....	0	0	.....	Prof. Bruhns.
Memel	.....	.....	30.10	764.5	28.9	— 1.7	94	S	.....	.....	3	.....	10ks	.....	.....	0	0	.....	Reinbrecht & Skalweit.
Münster	.....	.....	30.02	762.5	44.2	6.8	91	SW	.....	.....	1	.....	10	.....	.....	0.138	3.5	.....	Prof. E. Heis.
Neufahrwasser	.....	.....	30.07	763.8	32.0	0.0	85	SSW	.....	.....	3	.....	6	.....	.....	0	0	.....	A Lothe.
Posen	.....	.....	30.14	765.5	35.2	1.8	91	SW	.....	.....	2	.....	10	.....	.....	0	0	.....	Dr. Magener.
Strassburg, (in Alsace)	.....	.....	30.27	768.8	44.6	7.0	74	SW	.....	.....	3	.....	10	SW	.....	0.035	0.9	.....	Dr. Schur.
Stuttgart	.....	.....	30.27	768.8	44.6	7.0	74	SW	.....	.....	3	.....	10	.....	.....	0.209	5.3	Raining	Prof. Schoder.
Thorn	.....	.....	30.30	769.5	43.7	6.5	78	W	.....	.....	6	.....	.....	.....	.....	.....	.....	.....	Dr. Hasenbalg.
Treves, (Trier)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Prof. Flesch.
Weissenburg, (Bavaria)	28.66	727.9	29.83	757.6	42.8	6.0	89	W	.....	.....	4	.....	10	.....	.....	0.161	4.1	Foggy	Dr. von Bebber.
Wustrow, Naval School	.....	.....	30.21	767.4	41.0	5.0	69	WSW	.....	.....	4	.....	9	.....	.....	0.110	2.8	.....	E. F. Schütz.
GERMAN NAVAL SERIES.	.....	.....	30.02	762.4	34.9	1.6	96	SSW	.....	.....	5	.....	10	.....	.....	0.146	3.7	.....	

NOTE.—The elevation of Friedrichshafen is 413.4 meters, or 1,356.3 feet; Weissenburg, 431 meters, or 1,414.0 ft. In the originals the distinction between the amount of upper and lower clouds is not made. It is not always certain that the remarks in the weather column refer to the moment of observation.

GREEK SERIES.

Furnished by the coöperation of Professor Dr. J. F. Julius Schmidt, Director of the Royal Observatory at Athens.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Athens			30.14	765.6	46.9	8.3		NE			Strong							Cloudy	

Note.—The originals give the barometer corrected, but not reduced to sea-level; occasionally the kind of clouds; the weather as published. They omit the humidity, wind-force, amount of cloudiness and rain-fall.

ITALIAN SERIES.

Furnished by the coöperation of His Excellency the Minister of Agriculture, Industry and Commerce, and the respective Observers.

Udine			30.24	768.1	41.0	5.0	45	Calm	0	0		9				0	0		Prof. Giovanni Clodig.
Stelvio	22.14	562.4			20.8	— 6.2		SE			1	7		SSE		0	0		Signora Ernesta Manfredi.
Valdobbia	22.18	563.3			22.3	— 5.4	62	W			2	1		NW		0	0		Ab. Dom. Mongini.
Padua			30.26	768.7	38.3	3.5	83	NW	0.7	0.3		6		W		0	0		Prof. Dott. Lorenzoni.
Vicenza			30.26	768.7	40.5	4.7	61	NE	0	0		2				0	0		Conte Alm. Da Schio.
Verona			30.30	769.7	41.4	5.2	76	E			1	0				0	0		Dott. B. Bertoncelli.
Bergamo	28.86	733.0	30.22	767.6	35.6	2.0	82	E			2	5				0	0		Prof Trionfini Carlo.
Domodossola			30.24	768.9	39.2	4.0	62	S			4	3				0	0		Prof. Giuseppe Calza.
Milan			30.22	767.6	41.2	5.1	73	ENE			1	7		E		0	0		Ab. Gio. Capelli
Pavia			30.28	769.1	36.5	2.5	79	NE			1	9		NE		0	0		Prof. Gio. Cantoni.
Moncalieri			30.28	769.1	36.7	2.6	57	ENE	0.7	0.3		4		SW		2	0		Prof. P. F. Denza.
Mondovi	28.28	718.2	30.25	768.3	35.8	2.1	63	NW			4	1		WNW		0	0		Prof. D. C. Bruno.
Porto Maurizio			30.27	768.9	50.2	10.1	63	ENE			2	10				0	0		Prof. L. Vassallo.
Genoa			30.24	768.2	48.4	9.1	63	E	1.2	0.6		10		SW		0	0		Prof. G. M. Garibaldi.
Piacenza			30.28	769.1	37.2	2.9	75	E	1.2	0.6		10				0	0		Dott. G. Manzi.
Parma			30.28	769.0	39.2	4.0	77	E			2	10				0	0		Prof. P. Pigorini.
Florence			30.28	769.1	43.2	6.2	52	NNW			2	10		NNW		0	0		Cav. F. Meucci.
Leghorn			30.27	768.9	48.2	9.9	61	NNE	6.3	2.8		9		ENE		0	0		Prof. P. Monte.
Siena	29.00	736.5	30.24	768.2	45.1	7.3	57	N	0	0		1		W		0	0		Prof. L. Toscani.
Urbino	28.68	728.5	30.30	769.7	37.8	3.2	76	SW			2	6				0	0		Prof. P. Serpieri.
Pesaro			30.29	769.4	41.2	5.1	73	NW	16.1	7.2		1		N		0	0		Prof. Luigi Guidi.
Ancona			30.25	768.3	43.9	6.6	79	NW			2	3		NW		0	0		Prof. F. De— Bosis.
Grosseto			30.26	768.7	51.6	10.9	46	N			2	3		SE		0	0		Avv. P. Ponticelli.
Rome			30.23	767.7	53.1	11.7	37	NNW	3.8	1.7		0				0	0		Prof's. P. Secchi & L. Respighi.
Naples, O. U			30.23	767.8	51.8	11.0	41	ENE			2	1		N		0	0		Prof. L. Palmieri.
Lecce			30.14	765.5	45.3	7.4	87	NNW	12.5	5.6		6				0.083	2.1	Raining	Prof. C. De—Giorgi.
Cosenza			30.23	767.8	44.4	6.9	85	SW	0	0		0				0	0		Prof. F. D. Conti.
Cagliari			30.24	768.2	53.8	12.1	68	NW			1	9		NW		0	0		Prof. A. Pacinotti.
Riposto, (Sicily)			30.14	765.6	51.1	10.6	44	N			6	2		S		0.01	0.3	Light rain	Prof. F. Cafiero.
Palermo			30.21	767.3	52.3	11.3	41	NNE	6.2	2.8		10				0	0		Prof. G. Cacciatore.
Caltanissetta	28.19	716.0	30.21	767.2	42.3	5.7	76	NE			4	6		S		0	0		Prof. A. Pagani.
Siracusa			30.17	766.4	53.8	12.1	55	ENE			4	6		ESE		0	0		Prof. V. Giuliano.
Sub-Series.																			
Naples, S. R.			30.24	768.2	48.9	9.4	44	NE	4.9	2.2		0				0	0		Prof. F. Brioschi.

Note.—The originals give the wind-force by the scale 0 to 4, or the velocity in kilometers per hour; generally, no distinction between upper and lower clouds, occasionally the weather by the Vienna symbols. The elevation of Stelvio is 2,543.0 meters, or 8,342.9 feet; Valdobbia, 2,548.0 meters or 8,359.3 feet; Bergamo, 379.6 meters, or 1,24 3 feet; Mondovi, 556 meters, or 1,824.2 feet; Siena, 348.5 meters, or 1,143.3 feet; Urbino, 451 meters, or 1,479.7 feet; Caltanissetta, 570.3 meters, or 1,871.0 feet.

JAPANESE SERIES.

Furnished by the coöperation of the Imperial University of Tokei, Japan.

Tokei			30.00	762.0	33.5	0.8		N	3	1.3			10			0.69	17.5		Prof. P. V. Veeder.

Note.—The originals give the amount of cloudiness by the scale 0 to 4 without distinguishing between upper and lower clouds. The rain-fall is measured at 7 a. m., local time.

MEXICAN SERIES.

By authority of the Secretary of Public Works.

Furnished by the coöperation of Senor Mariano Barcena, Director of the Central Meteorological Observatory in the City of Mexico.

Mexico																		Mariano Barcena, Vicente Reyes, Miguel Perez. (Engineers in charge.)	

Note.—The elevation of Mexico is 2,290 meters, or 7,512.9 feet. The rain-fall is measured at 6 a. m., local time.

NETHERLANDS' SERIES.

Furnished by the cooperation of Professor Buys Ballot, Director of the Royal Meteorological Institute of the Netherlands at Utrecht.

Flushing			30.13	765.4	44.2	6.8		NW			4					0	0		
Groningen			29.94	760.5	43.3	6.3										0.024	0.6		
Helder			30.00	762.0	43.5	6.4		W			4					0	0		
Utrecht			30.02	762.5	45.9	7.7	71	WNW			4		5			0.067	1.7	Cloudy	

Note.—The originals give the wind-pressure in kilograms per square meter; for Utrecht, they give the weather as published, from which the amount of cloudiness is taken by the scale 0 to 4, without distinguishing between upper and lower clouds. It is assumed that the barometer readings have been reduced to sea-level.

NORWEGIAN SERIES.

Furnished by the coöperation of Professor H. Mohn, Director of the Royal Norwegian Meteorological Institute at Christiania.

Bergen			29.56	750.8	35.6	2.0	82	SSW	12.5	5.6			10			0.287	7.3	Raining	
Brönö			29.24	742.8	37.0	2.8	43	S	24.6	11			8			0	0		
Christiania			29.62	752.4	33.8	1.0	85	SSW	2.2	1			0			0.05	0.1		
Tromsö			29.22	742.2	29.8	— 1.2	63	SW	13.4	6			0			0	0		

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols. The cloudiness and weather at Bergen refer to 2h., p. m., local time, instead of 1h., 4 min.

PORTUGUESE SERIES.

Furnished by the coöperation of J. C. de Brito Capello, Director of the Meteorological Observatory of the Infante Don Luiz at Lisbon.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Angra, (Azores)	.....	.....	30.33	770.3	59.4	15.2	89	SSW	6.9	3.1	.....	.....	5	.....	.....	0	0	.....	Dr. J. A. Sampaio.
Campo Major	.....	.....	30.36	771.1	59.4	15.2	70	SSW	2.5	1.1	.....	.....	5	SW	.....	0	0	.....	Dr. A. M. R. dos Santos.
Funchal, (Madeira)	.....	.....	30.41	772.5	64.6	18.1	59	SW	7.4	3.3	.....	.....	0	.....	.....	0	0	.....	Capt. D. A. de Cunha.
Lisbon	.....	.....	30.43	772.9	57.2	14.0	64	N	11.2	5.0	.....	.....	7	WNW	.....	0	0	.....	The Observatory.
Ponta Delgada, (Azores)	.....	.....	30.39	771.8	63.0	17.2	80	S	4.9	2.2	.....	.....	4	.....	.....	0	0	.....	
.....																			

NOTE.—The originals give the wind-velocity in kilometers per hour; occasionally, the weather by the Vienna symbols; the amount of cloudiness without distinguishing between upper and lower clouds; the barometer corrected but not reduced to sea-level. The rain-fall at Libson is measured at noon, instead of 0 h. 6 m., p. m.

RUSSIAN SERIES.

Furnished by the cooperation of Professor H. Wild, Director of the Imperial Central Physical Observatory of Russia, at St. Petersburg.

Warsaw	.....	.....	30.16	766.0	27.3	— 2.6	92	ESE	4	2	.....	.....	10	.....	.....	.....	.....	Light snow..	Astronomical Obs.
Wilna	.....	.....	30.16	766.1	24.4	— 4.2	78	S	2	1	.....	.....	10	.....	.....	.....	.....	.....	Astronomical Obs.
Dorpat	.....	.....	30.10	764.4	22.5	— 5.3	91	S	4	2	.....	.....	8	.....	.....	.....	.....	.....	Physical Cabinet.
St. Petersburg	.....	.....	30.10	764.5	17.2	— 8.2	92	S	11	5	.....	.....	10	.....	.....	.....	.....	Light snow..	Central Physical Obs.
Kuopio	.....	.....	29.89	759.1	18.0	— 7.8	100	S	27	12	.....	.....	10	.....	.....	.....	.....	Snowing.....	Ch. Forsten.
Kieff	.....	.....	30.23	767.9	21.2	— 6.0	90	SE	4	2	.....	.....	10	.....	.....	.....	.....	.....	Physical Cabinet.
Nikolaiev	.....	.....	30.27	768.9	29.3	— 1.5	84	N	13	6	.....	.....	10	.....	.....	.....	.....	.....	Kurdakof
Kertch	.....	.....	30.22	767.5	22.6	— 5.2	88	N	7	3	.....	.....	10	.....	.....	.....	.....	.....	Lagorio.
Moscow	.....	.....	30.21	767.4	11.7	—11.3	68	NW	7	3	.....	.....	10	.....	.....	.....	.....	.....	Meteorological Obs.
Lugan	.....	.....	30.12	765.0	15.8	— 9.0	78	WSW	4	2	.....	.....	1	.....	.....	Blank	Blank	.....	Meteorological Obs.
Archangel	.....	.....	30.19	766.9	— 9.8	—23.2	94	ESE	9	4	.....	.....	10	.....	.....	.....	.....	.....	Ogorodnikof.
Tiflis	28.49	723.7	29.94	760.4	43.9	6.6	55	NW	4	2	.....	.....	10	.....	.....	.....	.....	.....	Physical Observatory.
Astrakhan	.....	.....	30.07	763.6	23.0	— 5.0	95	N	7	3	.....	.....	10	.....	.....	blank	Blank	.....	Sebastianof.
Kasan	.....	.....	29.98	761.4	6.3	—14.3	96	Calm	0	0	.....	.....	10	.....	.....	.....	.....	Light snow..	Physical Cabinet.
Orenburg	.....	.....	30.26	768.5	6.3	—14.3	79	SW	13	6	.....	.....	10	.....	.....	.....	.....	.....	Tschernischel.
Ekaterinburg	29.13	740.0	30.17	766.4	8.8	—12.9	88	SE	7	3	.....	.....	10	.....	.....	.....	.....	Snowing.....	Meteorogical Obs.
Nukuss	.....	.....	30.07	763.7	18.9	— 7.3	81	NE	4	2	.....	.....	0	.....	.....	.....	.....	.....	
Kasaly	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Bobrof.
Tashkend	28.47	723.1	30.28	769.0	29.5	— 1.4	.....	.....	.....	.....	.....	.....	10	.....	.....	.....	.....	.....	Michelson.
Barnaul	.....	.....	30.36	771.1	—15.0	—26.1	83	Calm	0	0	.....	.....	10	.....	.....	.....	.....	.....	Meteorological Obs.
Yeniseisk	.....	.....	30.28	769.0	—25.1	—31.7	68	N	2	1	.....	.....	0	.....	.....	.....	.....	.....	Marks.
Irkutsk	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Usolzef.
Peking, (China)	.....	.....	30.26	768.5	25 9	— 3.4	87	Calm	0	0	.....	.....	9	.....	.....	Blank	Blank	.....	Physical Observatory.
Nertchinsk	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Meteorological Obs.
Vladivostock	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Nikolaievsk, on the Amoor	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....																			
.....																			
.....																			

NOTE.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols; they omit the rain-fall. The elevation of Tiflis is 409 meters, or 1,341.8 feet; Ekaterinburg, 306. 4 ? m., or 1,005.2 ? ft.; Tashkend, 494.2 ? m., or 1,621.3 ? ft.; Irkutsk, 392 m., or 1,286 ft.; Nertchinsk, 592.0 ? m., or 1,942.2 ? ft.

SPANISH SERIES.

Furnished by the coöperation of Antonio Aguilar, Director of the Royal Observatory at Madrid, and of Don Cecilio Pujazon, Captain R. N. Director of the Naval Observatory at San Fernando.

Madrid	.....	.....	30.39	771.8	55.6	13.1	56	NE	3.7	1.67	.....	1	0	NW	.....	0	0	Slightly cl'dy	Royal Observatory.
San Fernando	.....	.....	30.39	772.0	60.6	15.9	70	WSW	9.2	4.1	.....	0	4	....	SW	.....	.....	.....	Naval Observatory.
.....																			
.....																			
.....																			
.....																			

NOTE.—The originals give the weather in general terms, as published; rain-fall for San Fernando from preceding to following midnight; wind-velocity for Madrid in kilometers per hour.

SWEDISH SERIES.

Furnished by the coöperation of Professor R. Rubenson, Director of the Royal Swedish Meteorological Institute, at Stockholm, and of Dr. H. H. Hildebrandsson, Chief of the Meteorological Division of the Upsala Observatory.

Haparanda	.....	.....	29.64	752.8	20.5	— 6.4	100	SE	.....	.....	6	.....	6	.....	.....	0	0	.....	
Umea	.....	.....	29.54	750.4	30.6	— 0.8	96	SW	.....	.....	2	.....	10	.....	.....	0.142	3.6	Snowing.....	
Hernosand	.....	.....	29.51	749.5	33.8	1.0	81	S	.....	.....	2	.....	0?	.....	.....	0.051	1.3	Snowing?.....	
Stockholm	.....	.....	29.73	755.1	33.4	0.8	92	SSW	.....	.....	4	.....	10	.....	.....	0.004	0.1	.....	
Wisby	.....	.....	29.88	758.9	33.4	0.8	92	SW	.....	.....	7	.....	10	.....	.....	0.008	0.2	.....	
SUB-SERIES.																			
Upsala	.....	.....	29.70	754.3	34.0	1.1	87	SSW	14.5	6.5	.....	.....	10	.....	WSW	0	0	.....	Dr. Hildebrandsson.
.....																			

NOTE.—The originals give the wind-force by the scale 0 to 6, and Upsala also velocity in meters per second; occasionally, the weather by the Vienna symbols, or in general terms; no distinction between the amount of upper and lower clouds. The rain-fall is measured at 8 a. m., local time.

SWISS SERIES.

Furnished by the coöperation of Professor R. Wolf, Director of the Observatory at Zurich, and of Professor E. Plantamour, Director of the Observatory at Geneva.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Geneva	28.91	734.4	30.37	771.4	44.6	7.0	49	SSW	.....	.....	1	.....	10	.....	.....	0	0	Covered	The Observatory.
Zurich	28.64	727.5	30.32	770.2	41.9	5.5	75	W	.....	.....	1	.....	9	.....	.....	0.126	3.2	Cloudy	The Observatory.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Note.—For Geneva the corresponding departures from the normal values are: Barometer, +7.5 mm; Thermometer, +4.4 cent.; Relative Humidity, —26 per cent.

Note.—The rain-fall is measured at Zurich at 7 a. m. on the following day. The originals give the barometer corrected but not reduced to sea-level; the wind-force by the scale 0 to 4 for Zurich; the amount of cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The elevation of Geneva is 408 meters, or 1,339 feet, and that of Zurich 470 meters, or 1,542 feet.

TURKISH SERIES.

Furnished by the cooperation of A. Coumbary, Effendi, Director of the Central Observatory at Constantinople, and of Professor C. V. A. Van Dyck, Superintendent of the Lee Observatory at Beirut.

Constantinople	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Fao, (Persian Gulf)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Salonica	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Valona	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Varna	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y	.....	.....	29.80	757.0	51.3	10.7	91	S	.....	.....	5	.....	10n	.....	SW	3.44	87.4	Raining	Prof. C. V. A. Van Dyck.

Note.—The originals give the wind-force by the scale 0 to 7, (except Beirut, by the scale 0 to 12, and Constantinople velocity in meters per second;) the weather in general terms as published; no distinction between upper and lower clouds, and, except Constantinople and Beirut, the amount by the scale 0 to 4. It is assumed that the barometer is reduced to sea-level.

CANADIAN SERIES.

Furnished by the cooperation of Professor G. T. Kingston, Director of the Magnetic Observatory at Toronto, and Superintendent of the Meteorological Office of the Dominion of Canada, and the respective Observers. Those marked with a star (*) are also telegraphed daily to the office of the Chief Signal Officer, U. S. Army.

Bathurst, N. B	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Hon. J. Ferguson.
Brockville, Ontario	.....	.....	30.41	772.4	27	— 2.8	.....	Calm	0	0	.....	.....	10s	.....	N	Inap.	Inap.	Cloudy	W. R. Bigg.
*Chatham, N. B	.....	.....	30.14	765.5	29	— 1.7	85	N	5	2.2	.....	.....	10ks	.....	N	0	0	Cloudy	G. A. Blair.
Charlottetown, P. E. Island	.....	.....	30.11	764.8	23	— 5.0	94	NW	3	1.3	.....	.....	10s	.....	.....	0	0	Cloudy	H. J. Cundall, C. E.
Cornwall, Ontario	.....	.....	30.46	773.7	28.4	— 2.0	88	NW	.....	.....	1	.....	10s	.....	.....	Inap.	Inap.	Dull	James Smith, M. A.
Dalhousie, N. B	.....	.....	.....	.....	29.4	— 1.4	84	W	.....	.....	1	.....	.....	.....	.....	0	0	Overcast	H. A. Johnson.
Esquimault, B. C	.....	.....	30.45	773.4	39.1	3.9	92	N	.....	.....	.....	0	0	.....	.....	0	0	Clear	W. H. Bevis.
*Father Point, Quebec	.....	.....	30.17	766.3	28	— 2.2	94	W	1	0.4	.....	.....	8n	.....	.....	0.09	2.3	Threatening	J. McWilliams.
Fredericton, N. B	.....	.....	29.217	741.97	25.0	— 3.9	94	W	1	0.4	.....	.....	10s	.....	.....	0	0	Cloudy	Prof. Harrison.
*Fort Garry, Manitoba	.....	.....	30.17	766.3	14	—10.0	91	NW	5	2.2	.....	0	2ks	.....	W	0	0	Fair	James Stewart.
Goderich, Ontario	.....	.....	30.46	773.7	26.7	— 2.9	90	S	.....	.....	2	.....	10n	.....	.....	0	0	Dull	H. J. Strang, M. A.
Granton, Ontario	29.27	743.4	30.45	773.4	24.3	— 4.3	.....	E	.....	.....	1	.....	Fog	.....	.....	0	0	Foggy	James Grant.
*Halifax, N. S	.....	.....	30.08	764.0	30	— 1.1	89	N	12	5.4	.....	.....	10ks	.....	.....	0	0	Cloudy	F. Allison, M. A.
Hamilton, Ontario	.....	.....	30.48	774.2	29.5	— 1.4	80	SW	.....	.....	.....	10cs	0	.....	.....	0	0	Cloudy	G. Dickson.
Heart's Content, N. F	.....	.....	29.85	758.2	27	— 2.8	100	E	.....	.....	1	.....	10	.....	.....	0.14	3.6	Snowing	E. Weedon.
*Kingston, Ontario	.....	.....	30.46	773.7	30	— 1.1	85	Calm	0	0	.....	.....	10s	.....	.....	Inap.	Inap.	Cloudy	S. Woods, M. A.
*Montreal, Quebec	.....	.....	30.37	771.4	25	— 3.9	78	W	6	2.7	.....	2cs	2ks	W	.....	0.05	1.3	Clear	C. H. McLeod, C. E.
*Ottawa, Ontario	.....	.....	30.41	772.4	27	— 2.8	76	W	4	1.8	.....	.....	10ks	.....	W	Inap.	Inap.	Cloudy	J. B. Haney.
*Parry Sound, Ontario	.....	.....	30.42	772.7	28	— 2.2	96	Calm	0	0	.....	.....	10n	.....	SE	0.03	0.8	Light snow	Rev. R. Mosley.
Port Dover, Ontario	.....	.....	30.44	773.2	29	— 1.7	89	Calm	0	0	.....	10k	0	.....	.....	0	0	Cloudy	H. Morgan.
Port Hastings, N. S	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Peter Grant.
Port Stanley, Ontario	.....	.....	30.45	773.4	27	— 2.8	97	E	4	1.8	.....	.....	10n	.....	.....	0	0	Cloudy	M. Payne.
*Quebec, Quebec	.....	.....	30.29	769.4	26	— 3.3	75	SW	2	0.9	.....	0	0	.....	.....	0.05	1.3	Clear	Capt. Ashe, R. N.
*Rockliffe, Ontario	.....	.....	30.40	772.1	25	— 3.9	93	Calm	0	0	.....	.....	10s	.....	NW	0	0	Cloudy	
St. John, N. B	.....	.....	30.21	767.3	30	— 1.1	84	N	5	2.2	.....	7k	0	.....	.....	0	0	Fair	G. Murdoch, C. E.
*Saugeen, Ontario	.....	.....	30.40	772.1	28	— 2.2	77	Calm	0	0	.....	.....	10n	.....	.....	0.07	1.8	Cloudy	K. Stewart.
Stayner, Ontario	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Inap.	Inap.	.....	R. J. Cole.
Stratford, Ontario	29.09	738.9	30.47	773.9	22.0	— 5.6	99	Calm	0	0	.....	.....	Fog	.....	.....	0	0	Foggy	C. J. MacGregor, M. A.
*Sydney, C. B	.....	.....	30.01	762.2	22	— 5.6	92	W	1	0.4	.....	8k	0	N	.....	0	0	Fair	T. C. Hill.
*Toronto, Ontario	.....	.....	30.44	773.2	31	— 0.6	86	W	1	0.4	.....	.....	10n	.....	.....	0	0	Cloudy	Magnetic Observatory.
Woodstock, Ontario	.....	.....	30.42	772.7	24.7	— 4.1	100	E	6	2.7	.....	.....	10s	.....	.....	0	0	Cloudy	J. Montgomery.
Sub-Series.																			
St. Johns, Newfoundland	.....	.....	29.86	758.4	30.0	— 1.1	.....	N	.....	.....	.....	.....	10n	.....	.....	0.03	0.8	Fair	John Delany.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Note.—The originals for Brockville, Charlottetown, Port Dover, Port Stanley, Stayner, St. Johns, N. F. and those telegraphed, give the amount of cloudiness by the scale 0 to 4. The elevation of Granton is 1,015 feet, or 309.4 m.; Stratford, 1,182 feet, or 360.3 m

UNITED STATES SERIES.

Furnished by the coöperation of Bvt. Brig. Gen. Albert J. Myer, Chief Signal Officer, U. S. Army.

STATIONS.	Barometer: Corrected for instrum'tal error and temperature. Inches.	Barometer: Corrected for instrum'tal error and temperature. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain fall or melted snow in the past 24 hours. Inches.	Rain fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Albany, N. Y.	.....	.....	30.32	770.1	33	0.6	79	Calm	0	0	.....	.....	10s	.....	.....	0.06	1.5	Cloudy	
Alpena, Mich.	.....	.....	30.39	771.9	25	— 3.9	100	SW	1	0.4	.....	.....	Fog	.....	.....	0	0	Foggy	
Atlantic City, N. J.	.....	.....	30.34	770.6	33	0.6	79	W	6	2.7	.....	0	0	.....	.....	0	0	Clear	
Augusta, Ga.	.....	.....	30.20	767.1	56	13.3	100	E	12	5.4	.....	.....	10n	.....	E	0.82	20.8	Light rain	
Baltimore, Md.	.....	.....	30.39	771.9	39	3.9	72	NW	5	2.2	.....	5c	2s	.....	.....	0	0	Fair	
Barnegat, N. J.	.....	.....	30.31	769.9	35	1.7	80	NW	12	5.4	.....	0	0	.....	.....	0	0	Clear	
Bismarck, Dakota	28.65	727.7	30.43	772.9	25	— 3.9	63	NW	1	0.4	.....	0	0	.....	.....	0	0	Clear	
Boston, Mass.	.....	.....	30.23	767.8	36	2.2	70	NW	14	6.3	.....	.....	10s	.....	.....	0	0	Cloudy	
Breckenridge, Minn.	.....	.....	30.22	767.6	14	—10.0	81	SW	6	2.7	.....	0	0	.....	.....	0	0	Clear	
Buffalo, N. Y.	.....	.....	30.42	772.7	31.0	— 0.6	79	Calm	0	0	.....	.....	10s	.....	.....	0	0	Cloudy	
Burlington, Vt.	.....	.....	30.39	771.9	30	— 1.1	78	N	4	1.8	.....	.....	10s	.....	.....	0.05	1.3	Cloudy	
Cairo, Ill.	.....	.....	30.20	767.1	38	3.3	71	N	12	5.4	.....	.....	10s	.....	.....	0	0	Cloudy	
Cape Hatteras, N. C.	.....	.....	30.23	767.8	46	7.8	85	NE	24	10.7	.....	5ck	Sm'e	W	.....	0	0	Fair	
Cape Henry, Va.	.....	.....	30.37	771.4	41	5.0	74	N	19	8.5	.....	10k	0	N	.....	0	0	Cloudy	
Cape Lookout, N. C.	.....	.....	30.29	769.4	48	8.9	93	NE	18	8.0	.....	.....	10s	.....	NE	0	0	Cloudy	
Cape May, N. J.	.....	.....	30.36	771.1	37	2.8	80	NW	14	6.3	.....	0	0	.....	.....	0	0	Clear	
Charleston, S. C.	.....	.....	30.22	767.6	57	13.9	87	N	6	2.7	.....	.....	10s	.....	SW	0.02	0.5	Cloudy	
Cheyenne, Wyoming	24.30	617.2	30.24	768.1	26	— 3.3	77	N	16	7.2	.....	2c	0	.....	.....	0	0	Fair	
Chicago, Ill.	.....	.....	30.36	771.1	36	2.2	70	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Cincinnati, Ohio	.....	.....	30.26	768.6	36	2.2	70	E	6	2.7	.....	.....	10s	.....	SE	0	0	Cloudy	
Cleveland, Ohio	.....	.....	30.44	773.2	29.5	— 1.4	89	NE	3	1.3	.....	0	10s	.....	.....	0	0	Cloudy	
Corsicana, Tex.	.....	.....	30.25	768.3	45	7.2	92	N	6	2.7	.....	2cs	0	.....	.....	0	0	Clear	
Davenport, Iowa	.....	.....	30.38	771.6	33	0.6	89	SE	4	1.8	.....	.....	10s	.....	.....	0	0	Cloudy	
Denison, Tex.	.....	.....	30.29	769.4	43	6.1	83	NW	6	2.7	.....	0	0	.....	.....	0.05	1.3	Clear	
Denver, Col.	25.10	637.5	30.32	770.1	32	0.0	89	NW	4	1.8	.....	.....	10n	.....	.....	0.10	2.5	Light snow	
Detroit, Mich.	.....	.....	30.40	772.1	31	— 0.6	89	NE	4	1.8	.....	.....	10s	.....	.....	0	0	Cloudy	
Dodge City, Kan.	27.66	702.6	30.08	764.0	33	0.6	87	N	6	2.7	.....	0	0	.....	.....	0	0	Clear	
Dubuque, Iowa	.....	.....	30.39	771.9	32	0.0	79	Calm	0	0	.....	.....	10s	.....	.....	0	0	Cloudy	
Duluth, Minn.	.....	.....	30.22	767.6	31	— 0.0	89	SW	4	1.8	.....	.....	10s	.....	.....	0	0	Cloudy	
Eastport, Me.	.....	.....	30.18	766.6	30	— 1.1	79	N	12	5.4	.....	0	0	.....	.....	0	0	Clear	
Erie, Pa.	.....	.....	30.43	772.9	33	0.6	89	Calm	0	0	.....	.....	10s	.....	.....	0	0	Cloudy	
Escanaba, Mich.	.....	.....	30.33	770.4	32	0.0	79	SW	9	4.0	.....	.....	10s	.....	SW	Inap.	Inap.	Cloudy	
Fort Gibson, Indian Ter.	.....	.....	30.24	768.1	34	1.1	90	NW	5	2.2	.....	0	0	.....	.....	0	0	Clear	
Ft. St. Michael, Alaska	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Fort Sill, Indian Ter.	29.08	738.6	30.24	768.1	42	5.6	42	N	8	3.6	.....	0	0	.....	.....	0	0	Clear	
Fort Sully, Dakota	28.61	726.7	30.36	771.1	33	0.6	89	NW	12	5.4	.....	0	8s	.....	NW	0	0	Fair	
Florence, Arizona	28.51	724.1	30.02	762.5	58	14.4	.....	NW	.....	.....	.....	0	0	.....	.....	0	0	Clear	
Galveston, Tex.	.....	.....	30.22	767.6	53	11.7	79	N	19	8.5	.....	5cs	0	W	.....	0	0	Fair	
Grand Haven, Mich.	.....	.....	30.39	771.9	23	— 5.0	94	E	2	0.9	.....	0	Fog	.....	.....	0	0	Foggy	
Indianapolis, Ind.	.....	.....	30.31	769.9	32	0.0	70	NE	5	2.2	.....	0	8s	.....	.....	0	0	Clearing	
Indianola, Tex.	.....	.....	30.23	767.8	57	13.9	87	NE	16	7.2	.....	5cs	0	.....	.....	0	0	Fair	
Jacksonville, Fla.	.....	.....	30.16	766.1	60	15.6	88	Calm	0	0	.....	.....	10s	.....	.....	0	0	Cloudy	
Keokuk, Iowa	.....	.....	30.35	770.9	32	0.0	89	E	4	1.8	.....	.....	10s	.....	E	0	0	Cloudy	
Key West, Fla.	.....	.....	30.13	765.3	70	21.1	95	SE	8	3.6	.....	0	8as	.....	.....	0.05	1.3	Cloudy	
Kittyhawk, N. C.	.....	.....	30.35	770.9	42	5.6	74	NE	28	12.5	.....	2cs	2s	W	.....	0	0	Fair	
Knoxville, Tenn.	.....	.....	30.12	765.0	48	8.9	77	N	8	3.6	.....	1c	2as	SW	SW	0.03	0.8	Fair	
La Crosse, Wis.	.....	.....	30.36	771.1	33	0.6	100	S	10	4.5	.....	.....	Fog	.....	.....	0	0	Foggy	
Leavenworth, Kan.	.....	.....	30.22	767.6	32	0.0	89	W	1	0.4	.....	0	Fog	.....	.....	0	0	Clear	
Louisville, Ky.	.....	.....	30.24	768.1	35	1.7	90	NE	9	4.0	.....	.....	10s	.....	NE	0	0	Cloudy	
Lynchburg, Va.	.....	.....	30.41	772.4	40	4.4	71	NE	4	1.8	.....	2ck	0	W	.....	0	0	Clear	
Malone, N. Y.	.....	.....	30.38	771.6	28	— 2.2	89	NW	4	1.8	.....	.....	10s	.....	NW	0.05	1.3	Cloudy	
Marquette, Mich.	.....	.....	30.24	768.1	32	0.0	69	S	6	2.7	.....	0	0	.....	.....	0	0	Clea	
Memphis, Tenn.	.....	.....	30.12	765.0	43	6.1	91	N	8	3.6	.....	.....	10s	.....	N	0.58	14.7	Light rain	
Milwaukee, Wis.	.....	.....	30.40	772.1	31	— 0.6	89	SW	6	2.7	.....	.....	10s	.....	.....	0	0	Cloudy	
Mobile Ala.	.....	.....	30.08	764.0	60	15.0	94	W	2	0.9	.....	.....	10s	.....	W	0.46	11.7	Cloudy	
Montgomery, Ala.	.....	.....	30.05	763.3	59.5	15.5	94	Calm	0	0	.....	10k	Fog	SW	.....	1.59	40.4	Cloudy	
Morgantown, W. Va.	29.27	743.4	30.39	771.9	34	1.1	79	N	2	0.9	.....	8c	0	SW	.....	0	0	Fair	
Mt. Washington, N. H.	23.75	603.2	30.11	764.8	16	— 8.9	66	Calm	0	0	.....	0	8s	.....	NW	0	0	Fair	
Nashville, Tenn.	.....	.....	30.07	763.6	46	7.8	92	NW	3	1.3	.....	.....	10s	.....	NW	0.13	3.3	Light rain	
New Haven, Conn.	.....	.....	30.28	769.1	38	3.3	93	NW	15	6.7	.....	.....	10s	.....	NW	0	0	Cloudy	
New London, Conn.	.....	.....	30.28	769.1	38	3.3	93	NW	10	4.5	.....	0	1s	.....	.....	0.03	0.8	Clear	
New Orleans, La.	.....	.....	30.10	764.5	57	13.9	87	NW	12	5.4	.....	0	7as	.....	NW	0.04	1.0	Fair	
Newport, R. I.	.....	.....	30.24	768.1	35	1.7	80	NW	9	4.0	.....	0	8as	.....	N	0.02	0.5	Cloudy	
New York, N. Y.	.....	.....	30.34	770.6	37	2.8	62	NW	8	3.6	.....	2ck	0	W	.....	0	0	Clear	
Norfolk, Va.	.....	.....	30.37	771.4	42	5.6	65	NE	11	4.9	.....	8cs	0	N	.....	0	0	Fair	
North Platte, Neb.	27.35	694.7	30.05	763.3	32	0.0	79	W	8	3.6	.....	0	2as	.....	W	0	0	Clear	
Omaha, Neb.	29.13	739.9	30.27	768.8	33	0.6	79	S	1	0.4	.....	2cs	2s	W	.....	0	0	Fair	
Oswego, N. Y.	.....	.....	30.42	772.7	34	1.1	74	NW	4	1.8	.....	.....	10s	.....	NW	0	0	Cloudy	
Pembina, Dakota	.....	.....	30.24	768.1	13	—10.6	90	W	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Philadelphia, Pa.	.....	.....	30.37	771.4	38	3.3	63	NE	10	4.5	.....	0	Sm'e	.....	.....	0	0	Clear	
Pike's Peak, Col.	17.74	450.6	29.95	760.7	0.7	—17.6	100	N	8	3.6	.....	.....	10n	.....	.....	0.14	3.6	Light snow	
Pittsburgh, Pa.	.....	.....	30.40	772.1	33	0.6	79	NE	3	1.3	.....	8k	0	E	.....	0	0	Cloudy	
Port Huron, Mich.	.....	.....	30.42	772.7	28	— 2.2	94	Calm	0	0	.....	.....	10s	.....	.....	Inap.	Inap.	Cloudy	
Portland, Me.	.....	.....	30.23	767.8	38	3.3	63	NW	10	4.5	.....	8k	0	NW	.....	0.02	0.5	Clearing	
Portland, Oregon	.....	.....	30.25	768.3	37	2.8	90	NW	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Punta Rassa, Fla.	.....	.....	30.17	766.3	64.6	17.8	89	E	5	2.2	.....	8cs	0	SW	.....	0	0	Fair	
Rochester, N. Y.	.....	.....	30.41	772.4	33	0.6	79	NW	5	2.2	.....	.....	Fog	.....	NW	Inap.	Inap.	Cloudy	
Salt Lake City, Utah	25.99	660.1	30.32	770.1	28	— 2.2	100	NW	4	1.8	.....	.....	.....	.....	.....	0.20	5.1	Foggy	
Sandy Hook, N. J.	.....	.....	30.28	769.1	37	2.8	80	N	13	5.8	.....	1k	0	NW	.....	0	0	Clear	
San Diego, Cal.	.....	.....	30.09	764.3	55	12.8	43	NE	3	1.3	.....	0	0	.....	.....	0	0	Clear	
San Francisco, Cal.	.....	.....	30.21	767.3	52	11.1	86	N	6	2.7	.....	0	0	.....	.....	0	0	Clear	
Santa Fé, N. M.	23.34	592.8	29.88	758.9	27	— 2.8	43	E	2	0.9	.....	0	0	.....	.....	0	0	Clear	
Savannah, Ga.	.....	.....	30.20	767.1	58	14.4	81	SE	8	3.6	.....	.....	10s	.....	S	Inap.	Inap.	Threatening	
Shreveport, La.	.....	.....	30.26	768.6	47	8.3	92	W	3	1.3	.....	0	0	.....	.....	0.10	2.5	Clear	
Smithville, N. C.	.....	.....	30.25	768.3	53	11.7	86	NE	2	0.9	.....	.....	10n	.....	.....	0.02	0.5	Light rain	
Springfield, Mass.	.....	.....	30.31	769.9	37.5	3.1	68	N	7	3.1	.....	2c	5s	N	N	0	0	Cloudy	
St. Louis, Mo.	.....	.....	30.32	770.1	32	0.0	90	NE	8	3.6	.....	0	5s	.....	.....	0	0	Fair	
St. Marks, Fla.	.....	.....	30.11	764.8	62	16.7	94	S	10	4.5	.....	Haze	8s	.....	S	0.09	2.3	Cloudy	
St. Paul, Minn.	.....	.....	30.23	767.8	33	0.6	79	SE	10	4.5	.....	.....	10s	.....	.....	0	0	Cloudy	
St. Paul's Island, Alaska	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Thatcher's Island, Mass.	.....	.....	30.24	768.1	35	1.7	90	NW	12	5.4	.....	.....	10s	.....	NW	0	0	Cloudy	
Toledo, Ohio	.....	.....	30.41	772.4	33	0.6	79	E	8	3.6	.....	.....	10s	.....	.....	Inap.	Inap.	Cloudy	
Tucson, Arizona	27.62	701.5	30.18	766.6	34	1.1	.....	S	.....	.....	.....	0	0	.....	.....	0	0	Clear	
Tybee Island, Ga.	.....	.....	30.18	766.6	55	12.8	93	E	12	5.4	.....	.....	10ks	.....	SE	0	0	Threatening	
Vicksburg, Miss.	.....	.....	30.19	766.8	49	9.4	96	NW	12	5.4	.....	.....	10s	.....	NW	0.64	16.3	Cloudy	
Virginia City, M. T.	24.66	626.4	30.14	765.5	16	— 8.9	83	Calm	0	0	.....	0	0	.....	.....	0.01	0.3	Clear	
Washington, D. C.	.....	.....	30.40	772.1	34.5	1.4	79	NE	4	1.8	.....	5cs	1s	W	W	0	0	Smoky	
Wilmington, N. C.	.....	.....	30.26	768.6	51	10.6	86	Calm	0	0	.....	.....	10n	.....	.....	0.02	0.5	Light rain	

UNITED STATES SERIES.—Continued.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Lower. 0—10.	Clouds. Amount. Low'r. 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Wood's Holl, Mass	.....	.....	30.24	768.1	35	1.7	80	NW	6	2.7	.....	.....	10s	.....	NW	0	0	Cloudy	
Yankton, Dakota	28.96	735.6	30.32	770.1	32	0.0	79	W	8	3.6	.....	0	0	.....	.....	0	0	Clear	
Yuma, Arizona	.....	.....	30.14	765.5	63	17.2	.....	N	.....	.....	.....	0	0	.....	.....	0	0	Clear	
Sub-Series.																			
Kingston, Jamaica, W. I.	.....	.....	30.23	767.8	73	22.8	85	Calm	0	0	.....	2c	2s	.....	.....	0.14	3.6	.....	James Gall.
Navassa, W. I.	.....	.....	.....	.....	76	24.4	.....	ENE	.....	.....	3	.....	.....	.....	.....	0	0	.....	Dr. G. H. Davison.
Clifton, Ja., W. I.	27.23	691.6	30.05	763.3	60	15.6	88	N	2.0	0.9	.....	5c	0	N	.....	0.67	17.0	Fine	C. Partridge.
Paramaribo, D. Guiana, S. A	.....	.....	30.02	762.5	79	26.1	82	E	.....	.....	3	3c	5k	E	.....	0	0	Fair	C. J. Hering.
Batavia, Dutch Guiana, S. A.	30.06	763.4	.....	.....	81.5	27.5	.....	E	.....	.....	.....	.....	.....	.....	.....	0	0	Fair	Dr. H. Groot.
Medellin, Colombia, S. A.	25.25	641.3	.....	.....	63.8	17.7	81	Calm	.....	.....	0	6k	0	.....	.....	0	0	Cloudy	Thomas Herran.
York Factory, B. A.	.....	.....	30.24	768.1	—8.0	—22.2	79	N	8	3.6	.....	2c	4s	NW	.....	0	0	Fair	J. Fortescue, W. Wood
Honolulu, Oahu, H. I.	.....	.....	30.15	765.8	70	21.1	95	NE	.....	.....	3	.....	.....	.....	.....	0	0	Squally	Daniel Smith.
Makawao, Maui, H. I.	.....	.....	30.04	763.0	63	17.2	88	Calm	.....	.....	0	0	2k	.....	.....	0.20	5.1	.....	F. L. Clarke.

Note.—The originals give the amount of cloudiness by the scale 0 to 4, except York Factory, Makawao, Medellin and Paramaribo. The elevation of the barometer at Bismarck is 1,677 feet, or 511.1 meters; Cheyenne, 6,057.3 ft., or 1,846.2 m.; Clifton, about 2,892 ft. or 881.5 m.; Denver, 5,135 ft., or 1,565.2 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Florence, 1,550 (?) ft. or 472.5 (?) m.; Makawao, 2,205 ft., or 672.1 m.; Morgantown, 1,027.9 ft., or 313.3 m.; Medellin, 4,876 ft., or 1,486.2 m.; Mt. Washington, 6,285 ft., or 1,915.6 m.; North Platte, 2,846 ft., or 867.4 m.; Omaha, 1,054.6 ft., or 321.4 m.; Pike's Peak, 14,150.7 ft., or 4,313.1 m.; Salt Lake City, 4,362.2 ft., or 1,329.6 m.; Santa Fé, 6,862.2 (?) ft., or 2,091.6 (?) m.; Tucson, 2,513 (?) ft., or 772.1 (?) m.; Virginia City, 5,480 (?) ft., or 1,670.3 (?) m.; Yankton, 1,278 ft., or 389.5 m. The following constants are added in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Denver, 5.22 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fé, 6.54 in.; Tucson, 2.59 in.; Virginia City, 5.48 in. The elevation of Batavia is about 6 feet; the barometric readings need the addition of 0.2 mm. or 0.01 in. for reduction to sea-level.

UNITED STATES NAVAL SERIES.

By authority of the **SECRETARY OF THE NAVY.**

Furnished by the cooperation of the Navy Department, through Commodore Daniel Ammen, U. S. N., Chief of Bureau of Navigation.

STATIONS AND VESSELS.	True course toward—	Hourly rate in knots.	*Barometer as reported.		Temperature of the Air.		Relative Humidity.	Wind.			Force.	Clouds.				Rain-fall or melted snow in the past 24 hours.		State of Ocean.	Direction of swell from—	Weather.	Observer.
								Direction.	Velocity			Amount.		Direction.							
			Inches.	Millimeters.	Fahrenheit.	Centigrade.	Per cent.	From—	Miles per hour.	Meters per second.	0—10.	Up'er 0—10.	Low'r 0—10.	Up'er From—	Low'r From—	Inches.	Millimeters.				
Naval Academy, Annapolis, Md.			30.00	762.0	36	2.2		NW			1		7			0	0			Cloudy	
Naval Hospital, Annapolis, Md.			30.37	771.4	34	1.1	79	N			1		5		NW	0	0			Cloudy	
Navy Yard, Mare Island, Cal.			30.29	769.4	47.5	8.6	96	E			1		1			0	0			Pleasant	
Navy Yard, Norfolk, Va.			30.48†	774.2†	43	6.1	83	NE			2		6cs							‡D. clouds	
Navy Yard, Pensacola, Fla.			30.14	765.5	62	16.7	94	WSW			1		10		E	0.062	1.57			‡D. clouds	
Navy Yard, Portsmouth, N.H.			30.18	766.6	35	1.7		SW			1									Cloudy	
¶ Canonicus, New Orleans, La.			29.83§	757.7†	55	12.8	93	NW			3		8		W					Cloudy	
Colorado, New York, N. Y.			30.40	772.1	39	3.9		NNW			2		7		NNW	0	0			Hazy	
Essex, Hampton Roads, Va.			30.36	771.1	43	6.1		NNE			3		9		SE					Squally	
Hartford, Norfolk Va.			30.44	773.2	44	6.7		NE			2		9		SE	0	0			Pleasant	
Michigan, Erie, Pa.			30.20	767.1	32	0.0	79	NNW			1		10		NNW					Cloudy	
Monongahela, Baltimore, Md.			30.26	768.6	37	2.8		NW			1		..cs							Hazy	
New Hampshire, Port Royal, S. C.			30.40	772.1	59	15.0		NE			3		10		SW			Smooth		‡D. clouds	
Omaha, Panama			30.05	763.3	75.5	24.2	90	NNW			2		1		S	0.01	0.3	Smooth		Pleasant	
Ossipee, New Orleans, La.			30.14	765.5	56	13.3		WNW			4		8		NW					‡D. clouds	
Pensacola, Panama			30.05	763.3	76	24.4	91	NNW			1		1							‡D. clouds	
Plymouth, Pensacola, Fla.			30.10	764.5	65	18.3	84	WSW			2		10			§0.1	§2.5	Smooth		Overcast	
¶ Rio Bravo, Matamoras, Mex.			30.05	763.3	52	11.1	93	NW			1		6		NE					‡D. clouds	
Santee, Annapolis, Md.			29.94	760.5	36	2.2	80	NW			1		7							Cloudy	
St. Louis, League Island, Pa.			30.22	767.6	41.7	5.3		NNW			2		5		SE	0	0			Fair	
Vandalia, Constantinople, Turkey.			30.25	768.3	41	5.0	91	ENE			3		10		SW					Drizzling	
Wabash, Boston, Mass.			30.29	769.4	37	2.8		N			2		10							Misty	
Wyoming, Washington, D.C.			30.47	773.9	43	6.1		Calm			0		4		W					‡D. clouds	

* It is not known that the barometer is corrected for temperature, instrumental error or elevation. † Aneroid Barometer. ‡ Detached clouds. ¶ Barometer corrected for instrumental error and reduced to sea-level. § Approximated.

UNITED STATES MARINE SERIES

REPORTED TO THE OFFICE OF THE CHIEF SIGNAL OFFICER OF THE ARMY.

NAMES OF VESSELS.	True course toward—	Hourly rate in knots.	Barometer reduced to sea-level.		Temperature of the Air.		Relative Humidity.	Wind.				Clouds.				State of Ocean.	Direction of swell from—	Weather.	OBSERVER.
								Direction.	Velocity.		Force.	Amount.		Direction.					
												Up'er	Low'r	Upper.	Lower.				
			Inches.	Millimeters.	Fahrenheit.	Centigrade.	Per cent.	From—	Miles per hour.	Meters per second.	0—10.	0—10.	0—10.	From—	From—				
PACIFIC MAIL S. S. CO. MARINE SERIES. Furnished by the coöperation of ————, President; Williams, Blanchard & Co., Agents.																			
S. S. City of Peking																			Lt. Z. L. Tanner, U.S.N
OCCIDENTAL AND ORIENTAL S. S. CO. MARINE SERIES. Furnished by the coöperation of George H. Bradbury, President; T. H. Goodman, Agent.																			
S. S. Belgic																			Capt. John Metcalf.
S. S. Gaelic																			Capt. W. H. Kidley.
S. S. Oceanic																			Capt. H. Parsell.
NORTH GERMAN LLOYD OF BREMEN MARINE SERIES. Furnished by the coöperation of A. Schumacher & Co., Agents.																			
S. S. Baltimore																			Capt. H. Andressen.
S. S. Berlin																			Capt. C. Pohle.
S. S. Braunschweig																			Capt. K. Undütsch.
S. S. Nürnberg																			Capt. A. Jaeger.
S. S. Ohio																			Capt. G. Meyer.
MARINE SERIES. (Miscellaneous.) Furnished by the coöperation of Captain James Jorgensen.																			
Schooner Addie Fuller, at Brunswick, Ga.			30.14	765.5	60	15.6	100	Calm	0	0			10n		SW			Light rain	Capt. James Jorgensen

NOTE.—The schooner Addie Fuller gives the amount of cloudiness by the scale 0 to 4.

COLLATED AT THE OFFICE OF THE CHIEF SIGNAL OFFICER OF THE ARMY, WASHINGTON, D. C.

The records which appear in this Bulletin are copied from the regular exchanges of this office, made in each instance in compliance with an especial request and are published for the uses of the coöperating observers. The barometric readings in the first two columns are reduced to freezing and their respective standards; those in the second two also to mean sea-level. The "weather" is generally published as given.

When the distinction between the upper and lower strata of clouds is not reported, the *kinds* or *types*, viz: cirrus, cumulus, stratus, nimbus, scud, fracto, pallio, haze, fog and smoke, as indicated, respectively, by the letters c, k, s, n, d, f, p, hz., fg. and sm'e, are generally published with the amount in the lower-cloud column. The distinction between the upper and lower strata is carefully made in the United States Series and a portion of the Canadian Series, and the types are indicated by the above letters or their combinations in the proper column

Albert J. Myer

Brig. Gen. (Bvt. Assg'd.) Chief Signal Officer, U. S. A.

BULLETIN

OF

INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON FEBRUARY 5, 1877.

7:35 A. M. WASHINGTON mean time.

6:7 A. M. MEXICO mean time.
7:7 A. M. SAN JOSE mean time.
0:6 P. M. LISBON mean time.
0:28 P. M. MADRID mean time.
0:43 P. M. GREENWICH mean time.
0:53 P. M. PARIS mean time.
1:1 P. M. BRUSSELS mean time.
1:4 P. M. UTRECHT mean time.
1:18 P. M. BERNE mean time.

1:26 P. M. CHRISTIANIA mean time.
1:33 P. M. COPENHAGEN mean time.
1:33 P. M. ROME mean time.
1:37 P. M. BERLIN mean time.
1:49 P. M. VIENNA mean time.
1:55 P. M. STOCKHOLM mean time.
2:18 P. M. ATHENS mean time.
2:39 P. M. CONSTANTINOPLE mean time.
2:44 P. M. ST. PETERSBURG mean time.

10:2 P. M. TOKEI mean time.

ALGERIAN SERIES.

Furnished by the coöperation of General d'Eudeville, Commandant Supérieur du Génie in Algeria.

STATIONS.	Barometer: Corrected for instrum'tal error and temperature. Inches.	Barometer: Corrected for instrum'tal error and temperature. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Nemours			30.42	772.7	64.4	18.0		SSE			1		2			0	0	Clear	Michel.
Algiers			30.42	772.6	60.8	16.0		E			1		7			0.063	1.6	Cloudy	Biscarrat.
La Calle			30.31	769.9	57.2	14.0		NW			3		4			0.315	8.0	Fair	Fleury.
Tunis			30.28	769.1	57.2	14.0		W			2		6			0.039	1.0	Fair	Jacques.
Sfax																			
Saida			30.34	770.6	62.6	17.0		NE			1		1			0	0	Clear	Millot.
Tebessa			30.26	768.6	59.0	15.0		NW			3		6			Inap.	Inap.	Fair	Bourgeois.
Geriville			30.24	768.0	42.8	6.0		W			1		1			0	0	Clear	Lemaillot.
Laghouat			30.29	769.4	55.6	13.1		N			1		1			0	0	Clear	Guyot.
Biskra			30.43	772.9	68.0	20.0		NW			3		5			0	0	Fair	Kuntz.

NOTE.—In the originals the distinction between the amount of upper and lower clouds is apparently not made. The weather is published as given. The rain-fall is measured at 7 a. m., local time.

AUSTRIAN SERIES.

Furnished by the cooperation of Professor Ferdinand Osnaghi, Director of the Imperial and Royal Central Meteorological Institute at Vienna.

STATIONS.	Barometer: Corrected for instrum'tal error and temperature. Inches.	Barometer: Corrected for instrum'tal error and temperature. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Agram			30.32	770.0	35.1	1.7	86	SW			1		10			0.087	2.2	Snowing	Prof. Ivan Stozir.
Cracow, I. R. Observatory			30.26	768.5	34.2	1.2	94	NE			1		10			0.016	0.4		Dr. Wierzbiski.
Eperies			30.25	768.3	31.5	— 0.3	79	Calm			0		10			0.016	0.40		Julius Mikolik.
Gratz			30.31	769.9	44.1	6.7	60	NW			5		1			0	0		Andreas Rospini.
Hermannstadt	29.02	737.1	30.31	769.9	44.1	6.7	60	NW			5		1			0	0		Prof. Reissenberger
Kremsmünster	28.74	730.1	30.24	768.2	32.5	0.3	66	SSW			1		10			0	0		Prof. C. Wagner.
Lemberg	29.03	737.3	30.44	773.1	36.0	2.2	72	WNW			2		10			0.217	5.5		Dr. T. Stanecki.
Nyiregyhaza			30.14	765.6	30.6	— 0.8	96	SE			1		5			0.020	0.5		Habzsuda Daniel.
Pola																			
Szegedin			30.24	768.0	46.8	8.2	67	W			1		10s			0	0		I.R.Hydrographic Office.
Trieste			30.20	769.3	27.5	— 2.5	83	S			1		10			0.020	0.50		Karl Stancel.
Vienna			30.28	769.2	46.9	8.3	74	Calm			0		0			0	0		Prof. V. Farolfi.
			30.34	770.6	39.4	4.1	66	NW			3		4			0.020	0.5		I. R. Central Met. Obs'y.

NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 7 p. m., local time. The elevation of Gratz is 343.5 meters, or 1,126.9 feet: Hermannstadt, 407.8 meters, or 1,337.9 feet; Kremsmünster, 383.6 meters, or 1,258.5 feet.

BELGIAN SERIES.

Furnished by the cooperation of J. C. Houzeau, Director of the Royal Observatory at Brussels.

STATIONS.	Barometer: Corrected for instrum'tal error and temperature. Inches.	Barometer: Corrected for instrum'tal error and temperature. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Arlon			30.52	775.3	35.4	1.9	95	SW			0		10			0.059	1.5		
Brussels			30.40	772.2	44.8	7.1	77	SW			2		10k		WSW	0.142	3.60		Royal Observatory.
Furnes			30.37	771.4	43.5	6.4	83	SSW			6		6			0.106	2.7		
Museyck			30.38	771.7	44.1	6.7	79	SSW			6		10			0.055	1.4		

NOTE.—In the originals, the weather is occasionally given in general notes.

BRITISH SERIES

Furnished by the coöperation of Robert H. Scott, Esq., Director of the Meteorological Office, London, Alexander Buchan, Secretary of the Scottish Meteorological Society, Edinburgh, and the respective Observers.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Upper. 0—10.	Clouds. Amount. Lower. 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Aberdeen			29.88	758.9	46.0	7.8		WNW	16	7.2			2			0	0	Blue sky	William Boswell.
Ardrossan			29.98	761.5				W			4		7					Raining	William McNeil.
Armagh, Observatory			30.08	764.0	47.7	8.7		SW	11	4.9			7					*D. clouds	S. Call, for Dr. Robinson.
Bidston (Liverpool Obs.)			30.12	765.0	50.0	10.0		SW	27	12.1			10					Overcast	John Hartnup.
Birr Castle, (Parsonstown)			30.12	765.0	50.8	10.4		SW			1		10					Overcast	J. Dreyer.
Bradford			30.11	764.8	45.5	7.5		W			2		10			0.03	0.8	Raining	J. McLandsborough.
Bridgetown, (Barbados)			30.06	763.5	79.0	26.1		NE			3		6					*D. clouds	Sergt. J. F. Halanen, A.
Cambridge, Observatory			30.27	768.8	47.5	8.6		SW			2		10					Overcast	H. Todd, [H.C.
Cardington			30.31	769.9	43.0	6.1		SW			1		7					Overcast	John McLaren.
Carlisle																			T. Bell, for J. Cartmell.
Chatham, School M. E.			30.33	770.4	46.7	8.2		W			2		10					Overcast	Capt. Fellows, R. E.
Dartmoor	28.84	732.5	30.38	771.6	44.0	6.7		W			2		10					Drizzling	R. E. Power.
Davos Platz, (Switzerland)	25.09	637.3			25.3	— 3.7	44	NE			1		6			0	0	*D. clouds	Francis Redford, M. A.
Donaghadee			29.94	760.5	49	9.4		W			3		3					*D. clouds	J. Mac Gowan.
Dover			30.34	770.6	47	8.3		W			3		5					½ clouded	J. Costello.
Eccles, (near Manchester)			30.13	765.3	49.1	9.5		SW	6.4	2.9			10					Gloomy	Thomas Mackereth.
Falmouth, Observatory			30.34	770.6	51.7	10.9		SSW			4		9					Overcast	The Staff.
Fort Napier, (Natal)	27.58	700.5	29.82	757.4	69.7	20.9		E			2		10					Overcast	P'vt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.90	759.4	85	29.4		N			0		2					*D. clouds	
Galway, Queen's College			30.05	763.3	48	8.9		W			2		10					Misty	Prof. A. H. Curtis.
Gibraltar, (Mediterranean)			30.39	771.9	61.5	16.4		E			3		5					*D. clouds	Corpl. C. Aitken, A.H.C.
Glasgow, Observatory			29.91	759.7	47.8	8.8		WSW			2		10					Raining	Lewis Stuart.
Great Yarmouth			30.26	768.3	42	5.6		WSW			3		5					Foggy	G. T. Watson.
Greenwich, Royal Obs'y			30.33	770.4	47.1	8.4		SW			3		10					Overcast	The Staff, for G. B. Airy.
Guernsey			30.40	772.1	50	10.0		SSW			2		8					*D. clouds	Dr. S. E. Hoskins.
Helston.			30.36	771.1	49	9.4		SW			7		8k			0.10	2.5	Showery	M. P. Moyle.
Holyhead			30.12	765.0	50	10.0		SW			5		4					*D. clouds	John Tilston.
Kew, Observatory			30.33	770.4	47.8	8.8		SW	15	6.7			10					Overcast	The Staff.
Kingstown			30.12	765.0	52	11.1		WSW			3		6					*D. clouds	George Mitchell.
Leicester Museum			30.23	767.8	45.1	7.3		SW			2		6					*D. clouds	Wm. J. Harrison, F.G.S.
Malta, (Mediterranean)			30.11	764.8	57.0	13.9		NW			2		8k					*D. clouds	Corp'l. P. Bravis, A.H.C.
Nairn			29.86	758.4	45	7.2		WSW			1		2					¼ clouded	W. D. Penny.
Nassau, (Bahamas)			30.12	765.0	74.0	23.3		E			1		4					*D. clouds	Surg. Maj. Henry.
Nottingham, Observatory			30.22	767.6	46.5	8.1		SSW			4		10k		SSW	0.031	0.79	Overcast	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			30.20	767.1	44.8	7.1		SSW			4		10					Rain & fog	Rev. Stephen Whitty.
Oxford, Radcliff Obs'y			30.28	769.1	49	9.4		SW			1		10					Gloomy	J. Lucas.
Plymouth			30.34	770.6	50.5	10.3		W			2		10					Overcast	John Merrifield.
Roche's Point			30.19	766.8	51	10.6		WSW			4		10					Raining	W. Kennedy.
Saint Ann's Head			30.24	768.1	50	10.0		SW			5		10					Overcast	John C. Walker.
Saint Helier, (Jersey)			30.42	772.7	48.6	9.2		SW			4		10					Overcast	A. P. Amy.
Sandwick Manse, (Orkneys)			29.78	756.4	43	6.1		WNW	31	13.9			0					Blue sky	Rev. C. Clouston, LL. D.
Scarborough																			F. Shaw.
Scutari Cemetery, (Turkey)			30.17	766.3	41.0	5.0		NE			2		8					*D. clouds	Sergt. W. H. Lyne.
Sheffield			30.16	766.1	48.0	8.9		SSW			2		8			0.030	0.91	Drizzling	W. F. Cooper.
Silloth Rectory			30.02	762.5	47.0	8.3	90	SW			3		8			0.	0	*D. clouds	Rev. Francis Redford
Stonyhurst, Observatory			30.10	764.5	46.0	7.8		W			4		10					Drizzling	Rev. S. J. Perry.
Stornoway, Lewis C., (Hebr.)			29.82	757.4	44	6.7		WNW			2		2					Blue sky	John Smith.
Stratfield Turgiss			30.34	770.6	46.8	8.2		SW			1		9					Overcast	Rev. Charles H. Griffith.
Thurso			29.78	756.4	45	7.2		WNW			5		6					*D. clouds	John Trotter.
Truro, Royal Institution			30.33	770.4	53	11.7		SW			7		10					Gloomy	W. Newcombe.
Valencia, Observatory			30.16	766.1	51.6	10.9		WSW	24	10.7			10					Misty	The Staff.
SUB-SERIES.																			
Calf of Man, (Isle of Man)																			Henry Mercer.
Cape Good Hope, Obs'y			30.12	765.0	68.1	20.1	60	NW	15	6.7		6	6						The Staff, for E. J. Stone.
Hobart Town, (Tasmania)			30.21	767.3	69.0	20.6	88	SE			1		5kn			0	0	Cloudy	Francis Abbott, F.R.A.S.
Leith, Restalrig Park			29.94	760.5	48.0	8.9		W			6		5k			0.01	0.3	Cloudy	Andrew Gibb.
Mauritius, Observatory			29.83	757.7				NW	11.0	4.9						0.39	9.9		C. Meldrum.
Melbourne, Observatory			30.11	764.8	60.4	15.8	74	SSE	5	2.2			10			0	0	Dense haze	R. L. J. Ellery.
Monach L't-house, (Hebrides)																			J. Youngclause.
North Unst, (Shetland Is.)			29.60	751.8	41	5.0		NW			7	0	1						Robert Burnet.

NOTE.—Generally, the originals do not give the relative humidity, rain-fall, or distinction between upper and lower clouds. The originals give the wind direction to 32 points and weather by the Beaufort notation. The originals give the barometer for Aberdeen, Cardington, Galway, Oxford, St. Helier, Sandwick, Scarborough, Stonyhurst, Leith, Monach and North Unst as read off and the amount of cloudiness for Stornoway by the scale 0 to 4. The wind-force is given by the scale 0 to 12 in the official series; except in lbs. per square foot for Greenwich and Hobart Town. The rain-fall is measured at Aberdeen at 10 a. m.; Bradford, 9 a. m.; Hobart Town, 7:30 a. m.; Nottingham, 6 p. m.; Mauritius, 9 a. m., local time. The elevation of Dartmoor is 1,400 feet, or 426.7 meters; Davos Platz, 5,3[illegible] feet, or 1,556.02 meters; Fort Napier, 2,200 feet, or 670.6 meters.
*Detached clouds.

By authority of the
MINISTER OF FOREIGN AFFAIRS.

COSTA RICA SERIES.

Furnished by the coöperation of Senor Federico Maison, Director of the Central Office of Statistics and Meteorology.

San José																			

DANISH SERIES.

Furnished by the coöperation of Captain N. Hoffmeyer, Director of the Royal Danish Meteorological Institute at Copenhagen.

Copenhagen			30.09	764.3	37.9	3.3	78	SW			2		8						
Fanöe			30.05	763.3	38.7	3.7	93	WSW			4		10						
Godthaab, (Greenland)			28.70	728.9	29.8	— 1.2		S			6		10					Raining	
Stykkisholm, (Iceland)			29.57	751.0	24.8	— 4.3	93	SW			4		2						
Thorshavn, (Faröe)			29.62	752.4	37.9	3.3	58	NW			6		5					Snow & hail	
Vestervig			29.90	759.4	37.4	3.0	100	SSW			6		10					Raining	

NOTE.—The originals give the wind-force by the scale 0 to 6; occasionally, weather by Vienna symbols; no distinction between the amount of upper and lower clouds.

FRENCH SERIES.

Furnished by the co-operation of His Excellency, U. J. Le Verrier, Director of the Paris Observatory, and the respective Observers.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather	Observer.
Alençon	.....	.....	30.53	775.4	44.6	7	94	W	.....	.....	1	.....	10k	.....	W	0.071	1.8	Covered	Normal School.
Amiens	.....	.....	30.46	773 6	43.2	6.2	75	NE	.....	.....	3	.....	5	.....	NE	0	0	Cloudy.....	Normal School.
Avignon	.....	.....	30.33	770.4	48.7	9.3	40	NNW	.....	.....	6	.....	0	.....	.....	0	0	Very clear...	Normal School.
Bar-sur-Seine	.....	.....	30.54	775 8	41.9	5.5	71	WNW	.....	.....	1	.....	8kn	.....	W	0.140	3.7	Very cloudy	C. Saillard.
Beaumette, (near Angers)	.....	.....	30.43	773.0	47.7	8.7	64	S	0	0	.....	.....	.....	.....	W	0	0	.....	Beaumette Observ'tory.
Beauvais	.....	.....	30.47	774.0	45.0	7.2	71	SW	.....	.....	3	.....	2	.....	.....	0.108	2.75	Slightly cl'dy	Normal School.
Besançon	.....	.....	30.56	776.2	41.0	5.5	73	NW	.....	.....	3	.....	5	.....	NE	0.374	9.5	Cloudy.....	Normal School.
Bourg en Bresse	.....	.....	30.56	776.3	41.0	5	74	N	.....	.....	4	.....	2ck	.....	S	0.16	4.	Slightly cl'dy	Normal School.
Bourges	.....	.....	30.55	776.0	41.7	5.4	85	WNW	.....	.....	2	.....	2	.....	WNW	0	0	Slightly cl'dy	Normal School.
Brest	.....	.....	30.35	771.0	51.6	10.9	72	SW	.....	.....	4	.....	9	.....	SW	0.030	0.75	.....	Naval Observatory.
Carcassonne	.....	.....	30.44	773.1	52.2	11.2	70	W	.....	.....	1	.....	2	.....	E	0	0	Slightly cl'dy	Normal School.
Caen	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Chartres	.....	.....	30.43	773.0	46.3	7.4	71	SW	.....	.....	2	.....	8	.....	SE	0	0	.....	Normal School.
Châlons-sur-Marne	.....	.....	30.53	775.4	45.3	7.4	69	SW	.....	.....	3	.....	5ck	.....	SE	0.157	4.0	Cloudy.....	Normal School.
Clermont	.....	.....	30.50	774.8	43.9	6.6	56	E	.....	.....	1	.....	2	.....	.....	0.047	1.2	.....	Puy de Dome Obs'y.
Commercy	.....	.....	30.51	774.9	40.5	4.7	79	WSW	.....	.....	4	.....	2cn	.....	W	0.110	2.8	Slightly cl'dy	Normal School.
Commune de Gréasque*	.....	.....	30.31	769.8	50.0	10.0	94	NW	.....	.....	2	.....	0	.....	.....	0	0	.....	M. Kina.
Grenoble	.....	.....	30.47	773.9	44.1	6.7	70	NE	.....	.....	4	.....	2ck	.....	SSE	0.049	1.25	Slightly cl'dy	Normal School.
La Roche-sur-Yon	.....	.....	30.54	775.7	46.4	8.0	91	SE	.....	.....	1	.....	10	.....	.....	0.098	2.5	Covered	Normal School.
Le Mans	.....	.....	30.50	774.8	44.2	6.8	83	SW	.....	.....	3	.....	5	.....	SW	0.012	0.3	Cloudy.....	Normal School.
Lons-Le-Saulnier	.....	.....	30.53	775.5	41.2	5.1	66	NNE	.....	.....	2	.....	0	.....	.....	0	0	Clear.....	Normal School.
Lorient	.....	.....	30.48	774.2	51.1	10.6	68	S	.....	.....	2	.....	5	.....	S	0.071	1.8	Cloudy.....	Naval Observatory.
Mâcon	.....	.....	30.56	776.1	42.1	5.6	94	N	.....	.....	2	.....	0	.....	.....	0.087	2.2	Clear	Normal School.
Metz	.....	.....	30.56	776.3	38.3	3.5	89	SW	.....	.....	2	.....	5k	.....	SW	0.130	3.3	.....	M. Schuster.
Mirecourt	.....	.....	30.57	776.4	37.0	2.8	86	NNE	.....	.....	2	.....	5	.....	SSW	0	0	Cloudy.....	Normal School.
Nismes	.....	.....	30.33	770.3	52.5	11.4	56	NW	.....	.....	6	.....	.....	.....	.....	0	0	.....	Normal School.
Orleans	.....	.....	30.51	774.9	45.3	7.4	69	W	.....	.....	2	.....	5	.....	W	0	0	Partly cl'dy.	Normal School.
Paris, Observatory	.....	.....	30.50	774.7	45.0	7.2	73	S	.....	.....	2	.....	8k	.....	SW	0.020	0.50	Very cloudy	National Observatory.
Parthenay	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Privas	.....	.....	30.44	773.2	45.0	7.2	97	N	.....	.....	6	.....	2	.....	N	0	0	Slightly cl'dy	Normal School.
Rochefort, Observatory	.....	.....	30.52	775.1	49.1	9.5	75	SSE	.....	.....	3	.....	8	.....	N	0	0	¾ covered....	Naval Observatory.
Rouen	.....	.....	30.45	773.3	47.7	8.7	63	WNW	.....	.....	2	.....	10	.....	.....	0.028	0.5	Covered	Normal School.
Saint Lo	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Tarbes	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Villefranche	29.26	743.1	30.35	771.0	52.5	11.4	85	W	.....	.....	2	.....	0	.....	.....	0	0	Clear.....	Normal School.
	.....	.....	30.58	776.6	44.4	6.9	90	N	.....	.....	1	.....	0	.....	.....	0.20	5.	Clear.....	Normal School.
SUB-SERIES.																			
Fort de France, Martinique	.....	.....	29.89	759.3	75.9	24.4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	L'Abbé Marchési.
Marseilles	.....	.....	30.29	769.3	52.3	11.3	50	NW	.....	.....	1	.....	1	.....	.....	0	0	Clear.....	Marseilles Observatory.
Mont-Louis	25.11	637.9	30.43	772.9	41.4	5.2	25	SW	7.4	3.33	.....	.....	2	.....	W	0	0	.....	—. Falguère.
Montsouris, Paris	.....	.....	30.48	774.2	44.6	7.0	75	SSW	.....	.....	2	.....	8	.....	SW	0.020	0.5	.....	Montsouris Observatory
Perpignan	.....	.....	30.41	772.4	54.5	12.5	47	NE	16.8	7.50	.....	.....	0	.....	.....	0	0	.....	Dr. Fines.
Pic du Midi, (Summit,) H. P.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. Baylac.
Pic du Midi, (Plantade,) H. P.	22.67	575.7	.....	.....	39.2	4.0	.....	N	.....	.....	1	.....	7	.....	.....	0	0	Fair.....	General de Nansouty.
Saint Maur, (near Paris)	.....	.....	30.40	774.5	45.5	7.5	76	S	.....	.....	1	.....	6	.....	.....	0.032	0.9	Cloudy.....	E. Renou.
Toulouse	.....	.....	30.52	775.1	43.3	6.3	93	NNW	.....	.....	1	.....	3	.....	.....	0.028	0.7	.....	Toulouse Observatory.
Tours	.....	.....	30.47	773.8	45.3	7.4	66	SSW	.....	.....	1	.....	10	.....	W	0	0	.....	C. Marquet.
Versailles, (near Paris)	.....	.....	30.47	774.0	47.5	8.6	61	SW	.....	.....	1	.....	5	.....	.....	0.007	0.19	Fair.....	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai)	.....	.....	29.88	758.9	45.1	7.3	96	SE	12.1	5.42	.....	.....	10	.....	.....	0.272	6.9	.....	Marc Dechevrens, S. J.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—Generally, the originals give the wind-force by the scale 0 to 7; no distinction between upper and lower clouds, and, in the official series, the amount by the scale 0 to 4 the rain-fall as measured at 7, 8 or 9 a. m., local time; at Clermont, 9 a. m. of the following day; the weather in general terms as published. The elevation of Clermont is 388 meters, or 1,272.9 feet; Commune de Gréasque, 322 meters, or 1,056.4 feet; Tarbes, 308 meters, or 1,010 feet; Mont-Louis, 1,586.40 meters, or 5,204.8 feet; Pic du Midi, (Summit,) 2,877 meters, or 9,439.1 feet; Pic du Midi, (Plantade,) 2,366 meters, or 7,762.6 feet. In correcting the Mont-Louis barometric observations for altitude, the constant 135, millimeters has been added. *Bouches-du-Rhône

GERMAN SERIES.

Furnished by the coöperation of Professor Dr. G. Neumayer, Director of the German Naval Observatory, Hamburg.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather	Observer.
Bamberg	.....	.....	30.30	771.1	38.8	3.8	70	W	.....	.....	3	.....	6	W	.....	0.236	6.0	.....	Prof. T. Hoh
Berlin	.....	.....	30.33	770.3	40.1	4.5	80	W	.....	.....	2	.....	6	.....	.....	0.075	1.9	.....	Prof. Arndt.
Breslau	.....	.....	30.31	769.9	36.8	2.1	82	NW	.....	.....	2	.....	10	.....	.....	0.008	0.2	.....	Royal University Obs'y
Carlsruhe	.....	.....	30.51	775.0	40.6	4.8	81	SW	.....	.....	3	.....	8	.....	.....	0.181	4.6	.....	A. Senz.
Cassel	.....	.....	30.40	772.1	35.1	1.7	74	WSW	.....	.....	2	.....	3	SW	.....	0.055	1.4	.....	Dr. H. Möhl.
Crefeld	.....	.....	30.38	771.6	43.9	6.6	73	W	.....	.....	4	.....	8	.....	.....	0.08	2.	.....	Director Lose.
Emden	.....	.....	30.32	770.1	44.6	7.0	94	SW	.....	.....	2	.....	10	.....	.....	0.055	1.4	.....	Prof. Prestel.
Frankfort on the Main	.....	.....	30.54	775.6	42.1	5.6	72	SSW	.....	.....	1	.....	7	.....	.....	0.055	1.4	.....	Physical Society.
Friedrichshafen	29.05	737.9	30.56	776.1	39.4	4.1	72	WSW	.....	.....	3	.....	8	.....	.....	0.028	0.7	Snowing.	M. Wilhelm.
Hamburg	.....	.....	30.27	768.9	39.9	4.4	84	SW	.....	.....	5	.....	6k	WSW	.....	0.075	1.9	Fair.....	Captain F. Hegemann.
Kiel	.....	.....	30.17	766.3	39.7	4.3	81	SW	.....	.....	4	.....	10	.....	.....	0.024	0.6	.....	Prof. G. Karsten.
Königsberg, (Prussia)	.....	.....	30.04	763.0	34.3	1.3	81	W	.....	.....	5	.....	9	.....	.....	0.028	0.7	Snowing.....	Prof. E. Luther.
Köslin	.....	.....	30.19	766.9	35.6	2.0	.....	W	.....	.....	2	.....	7	.....	.....	0	0	.....	H. Müller.
Leipsic	.....	.....	30.40	772.1	38.7	3.7	78	W	.....	.....	2	.....	9	WNW	.....	0.098	2.5	.....	Prof. Bruhns.
Memel	.....	.....	29.97	761.3	34.0	1.1	92	WSW	.....	.....	4	.....	10ks	.....	.....	0.094	2.4	.....	Reinbrecht & Skalweit.
Münster	.....	.....	30.31	769.9	42.6	5.9	85	SW	.....	.....	1	.....	10	.....	.....	0	0	.....	Prof. E. Heis.
Neufahrwasser	.....	.....	30.08	764.1	36.3	2.4	75	WNW	.....	.....	5	.....	1	.....	.....	0	0	.....	A Lotho.
Posen	.....	.....	30.26	768.7	37.0	2.8	87	WNW	.....	.....	5	.....	7	.....	.....	0	0	.....	Dr. Magener.
Strassburg, (in Alsace)	.....	.....	30.54	775.7	42.3	5.7	82	SW	.....	.....	1	.....	4	W	.....	0.193	4 9	.....	Dr. Schur.
Stuttgart	.....	.....	30.50	774.8	41.0	5.0	61	NW	.....	.....	1	.....	5	.....	.....	0	0	.....	Prof. Schoder.
Thorn	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Dr. Hasenbalg.
Treves, (Trier)	.....	.....	30.43	772.9	39.7	4.3	84	SW	.....	.....	4	.....	10	.....	.....	0	0	Foggy	Prof. Flesch.
Weissenburg, (Bavaria)	28.90	734.0	30.48	774.3	36.0	2.2	75	W	.....	.....	4	.....	9	W	.....	0.031	0.8	.....	Dr. von Bebber.
Wustrow, Naval School	.....	.....	30.26	768.6	34.9	1.6	91	SW	.....	.....	2	.....	10	.....	.....	0	0	Foggy	E. F. Schütz.
GERMAN NAVAL SERIES.																			
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—The elevation of Friedrichshafen is 413.4 meters, or 1,356.3 feet; Weissenburg, 431 meters, or 1,414.0 ft. In the originals the distinction between the amount of upper and lower clouds is not made. It is not always certain that the remarks in the weather column refer to the moment of observation.

GREEK SERIES.

Furnished by the cooperation of Professor Dr. J. F. Julius Schmidt, Director of the Royal Observatory at Athens.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Athens			30.19	766.9	45 7	7.6		N										Covered	

Note.—The originals give the barometer corrected, but not reduced to sea-level; occasionally the kind of clouds; the weather as published. They omit the humidity, wind-force, amount of cloudiness and rain-fall.

ITALIAN SERIES.

Furnished by the cooperation of His Excellency the Minister of Agriculture, Industry and Commerce, and the respective Observers.

Udine			30.25	768.4	49.1	9.5	45	S	2.5	1.1			7			0	0		Prof. Giovanni Clodig.
Stelvio	22.19	563.7			20.3	— 6.5		SE			1		10			0	0		Signora Ernesta Manfredi.
Valdobbia	22.23	564.6			15.8	— 9.0	67	W			2		0			0	0		Ab. Dom. Mongini.
Padua			30.28	769.1	41.5	5.3	66	SE	0.7	0.3			6	SE		0	0		Prof. Dott. Lorenzoni.
Vicenza			30.28	769.1	45.5	7.5	53	SE	0.7	0.3			3			0	0		Conte Alm. Da Schio.
Verona			30.27	768.9	41.0	5.0	72	NE			1		0			0	0		Dott. B. Bertoncelli.
Bergamo	28.89	733.8	30.25	768.4	43.9	6.6	49	SW			1		2			0	0		Prof Trionfini Carlo.
Domodossola			30.27	768.8	49.1	9.5	52	N			6		0			0	0		Prof. Giuseppe Orlza.
Milan			30.30	769.5	45.3	7.4	80	S			1		0			0	0		Ab. Gio. Capelli
Pavia			30.29	769.4	46.4	8.0	45	E			4		3	SW		0	0		Prof. Gio. Canton.
Moncalieri			30.33	770.3	43.2	6.2	66	SSW	2.5	1.1			1			0	0		Prof. P. F. Denza.
Mondovi	28.34	719.9	30.32	770.0	44.4	6.9	17	N			4		0			0	0		Prof. D. C. Bruno.
Porto Maurizio			30.28	769.0	55.8	13.2	8	NNW			4		1			0	0		Prof. L. Vassallo.
Genoa			30.23	767.9	53.2	11.8	22	N	8.7	3.9			0			0	0		Prof. G. M. Garibaldi.
Piacenza			30.31	769.8	41.0	5.0	67	WNW	3.8	1.7			6	NE		0	0		Dott. G. Manzi.
Parma			30.31	769.9	37.9	3.3	73	SW			4		10			0	0		Prof. P. Pigorini.
Florence			30.25	768.3	46.8	8.2	57	N			2		8			0	0		Cav. F. Meucci.
Leghorn			30.19	766.7	48.2	9.0	61	ENE	6.9	3.1			9	NE		0	0		Prof. P. Monte.
Siena	28.94	735.1	30.19	766.8	46.2	7.9	49	E	1.3	0.6			9	N		0	0		Prof. L. Toscani.
Urbino	28.67	728.1	30.29	769.3	35.6	2.0	73	NE			2		10			0	0		Prof. P. Serpieri.
Pesaro			30.30	769.7	40.5	4.7	82	NW	13.0	5.8			10	NW		0	0		Prof. Luigi Guidi.
Ancona			30.28	769.0	42.3	5.7	75	WNW			2		10	NW		0	0		Prof. F. De— Bosis.
Grosseto			30.18	766.6	52.3	11.2	47	NNE			4		5	SE		0	0		Avv. P. Ponticelli.
Rome			30.17	766.2	50.0	10.0	52	NNW	3.8	1.7			8			0	0		Prof's. P. Secchi & L. Respighi.
Naples, O. U.			30.15	765.7	53.8	12.1	52	NE			4		9	NW		0	0		Prof. L. Palmieri.
Lecce			30.18	766.6	47.8	8.8	66	NNW	8.7	3.9			6			0	0		Prof. C. De—Giorgi.
Cosenza			30.20	767.0	47.8	8.8	70	SW	0	0			2	WNW		0	0		Prof. F. D. Conti.
Cagliari			30.13	765.2	54.0	12.2	65	NW			6		4	NW		0.020	0.5	Light rain.	Prof. A. Pacinotti.
Riposto, (Sicily)			30.11	764.7	51.8	11.0	63	S			2		4	S		0	0		Prof. F. Cafiero.
Palermo			30.10	764.4	53.4	11.9	58	NNE	5.6	2.5			9			0.004	0.1	Light rain.	Prof. G. Cacciatore.
Caltanissetta	8.12	714.1	30.13	765.3	44.2	6.8	82	WNW			2		10	S		0.004	0.1	Light rain.	Prof. A. Pagani.
Siracusa			30.19	766.7	54.3	12.4	57	SE			2		8	SW		0	0		Prof. V. Giuliano.
Sub-Series.																			
Naples, S. R.			30.18	766.6	50.5	10.3	49	NE	1.3	0.6			8	NE		0	0		Prof. F. Brioschi.

Note.—The originals give the wind-force by the scale 0 to 4, or the velocity in kilometers per hour; generally, no distinction between upper and lower clouds, occasionally the weather by the Vienna symbols. The elevation of Stelvio is 2,543.0 meters, or 8,342.9 feet; Valdobbia, 2,548.0 meters or 8,359.3 feet; Bergamo, 379.6 meters, or 1,245.3 feet; Mondovi, 556 meters, or 1,824.2 feet; Siena, 348.5 meters, or 1,143.3 feet; Urbino, 451 meters, or 1,479.7 feet; Caltanissetta, 570.3 meters, or 1,871.0 feet.

JAPANESE SERIES.

Furnished by the coöperation of the Imperial University of Tokei, Japan.

Tokei			30.21	767.3	30.5	— 0.8		NW	1	0.4			0			0	0		Prof. P. V. Veeder.

Note.—The originals give the amount of cloudiness by the scale 0 to 4 without distinguishing between upper and lower clouds. The rain-fall is measured at 7 a. m., cal time.

MEXICAN SERIES.

By authority of the Secretary of Public Works.

Furnished by the coöperation of Senor Mariano Barcena, Director of the Central Meteorological Observatory in the City of Mexico.

Mexico																			Mariano Barcena. Vicente Reyes. Miguel Perez. (Engineers in charge.)

Note.—The elevation of Mexico is 2,290 meters, or 7,512.9 feet. The rain-fall is measured at 6 a. m., local time.

NETHERLANDS' SERIES.

Furnished by the cooperation of Professor Buys Ballot, Director of the Royal Meteorological Institute of the Netherlands at Utrecht.

Flushing			30.38	771.7	44.2	6.8		WSW			4					0.012	0.3		
Groningen			30.19	766.8	41.4	5.2										0.004	0.1		
Helder			30.24	768.0	44.8	7.1		SW			4					0.114	2.9		
Utrecht			30.29	769.4	44.1	6.7	80	SW			4		8			0.016	0.4	Very cloudy	

Note.—The originals give the wind-pressure in kilograms per square meter; for Utrecht, they give the weather as published, from which the amount of cloudiness is taken by the scale 0 to 4, without distinguishing between upper and lower clouds. It is assumed that the barometer readings have been reduced to sea-level.

NORWEGIAN SERIES.

Furnished by the cooperation of Professor H. Mohn, Director of the Royal Norwegian Meteorological Institute at Christiania.

Bergen			29.54	750.4	40.3	4.6	68	SSW	26.8	12.0			10			0.787	20.0	Raining	
Brönö			29.23	742.4	33.4	0.8	85	SW	24.6	11			10					Snowing	
Christiania			29.70	754.3	28.8	— 1.8	88	SSW	2.5	1.1			10			0	0		
Tromsö			29.28	743.7	27.7	— 2.4	75	SW	11.2	5			0			0	0		

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols. The cloudiness and weather at Bergen refer to 2h., p. m., local time, instead of 1h., 4 min.

PORTUGUESE SERIES.

Furnished by the coöperation of J. C. de Brito Capello, Director of the Meteorological Observatory of the Infante Don Luiz at Lisbon.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Angra, (Azores)	.....	.....	30.31	769.8	61.2	16.2	89	SW	7.4	3.3	.....	.....	6	.....	.....	0	0	.....	Dr. J. A. Sampaio.
Campo Major	.....	.....	30.39	771.9	57.0	13.9	52	ENE	6.9	3.1	.....	.....	3	.....	.....	0	0	.....	Dr. A. M. R. dos Santos.
Funchal, (Madeira)	.....	.....	30.40	772.1	65.7	18.7	57	E	8.7	3.9	.....	.....	0	.....	.....	0	0	.....	Capt. D. A. de Cunha.
Lisbon	.....	.....	30.44	773.1	54.9	12.7	68	NE	11.2	5.0	.....	.....	1	.....	.....	0	0	.....	The Observatory.
Ponta Delgada, (Azores)	.....	.....	30.38	771.7	60.8	16.0	85	S	6.3	2.8	.....	.....	10	.....	.....	0.008	0.2	.....	
.....																			

Note.—The originals give the wind-velocity in kilometers per hour; occasionally, the weather by the Vienna symbols; the amount of cloudiness without distinguishing between upper and lower clouds; the barometer corrected but not reduced to sea-level. The rain-fall at Libson is measured at noon, instead of 0 h. 6 m., p. m.

RUSSIAN SERIES.

Furnished by the coöperation of Professor H. Wild, Director of the Imperial Central Physical Observatory of Russia, at St. Petersburg.

Warsaw	.....	.....	30.16	766.1	33.4	0.8	85	W	13	6	.....	.....	10	.....	.....	.....	.....	.....	Astronomical Obs.
Wilna	.....	.....	30.00	761.9	27.3	— 2.6	83	S	2	1	.....	.....	10	.....	.....	.....	.....	Snowing.....	Astronomical Obs.
Dorpat	.....	.....	29.87	758.6	27.0	— 2.8	94	SW	7	3	.....	.....	10	.....	.....	.....	.....	Snowing.....	Physical Cabinet.
St. Petersburg	.....	.....	29.84	757.9	24.3	— 4.3	93	SSW	9	4	.....	.....	10	.....	.....	.....	.....	Snowing....	Central Physical Obs.
Kuopio	.....	.....	29.65	753.2	27.0	— 2.8	100	S	7	3	.....	.....	10	.....	.....	.....	.....	.....	Ch. Forsten.
Kieff	.....	.....	30.14	765.6	25.7	— 3.5	91	SSW	7	3	.....	.....	10	.....	.....	.....	.....	.....	Physical Cabinet.
Nikolaiev	.....	.....	30.30	769.7	30.7	— 0.7	77	SE	9	4	.....	.....	8	.....	.....	.....	.....	.....	Kurdakof.
Kertch	.....	.....	30.30	769.6	29.1	— 1.6	76	N	7	3	.....	.....	4	.....	.....	.....	.....	.....	Lagorio.
Moscow	.....	.....	30.23	767.7	12.9	—10.6	76	S	9	4	.....	.....	10	.....	.....	.....	.....	.....	Meteorological Obs.
Lugan	.....	.....	30.24	768.2	10.0	—12.2	77	E	2	1	.....	.....	10	.....	.....	.....	.....	.....	Meteorological Obs.
Archangel	.....	.....	29.97	761.1	— 8.7	—22.6	92	SE	22	10	.....	.....	10	.....	.....	.....	.....	.....	Ogorodnikof.
Tiflis	28.60	726.4	30.05	763.3	42.6	5.9	81	N	9	4	.....	.....	9	.....	.....	.....	.....	.....	Physical Observatory.
Astrakhan	.....	.....	30.27	768.9	13.1	—10.5	86	NW	7	3	.....	.....	2	.....	.....	.....	.....	.....	Sebastianof.
Kasan	.....	.....	30.07	763.8	— 3.5	—19.7	94	W	2	1	.....	.....	2	.....	.....	.....	.....	.....	Physical Cabinet.
Orenburg	.....	.....	30.32	770.0	2.3	—16.5	75	SW	13	6	.....	.....	3	.....	.....	.....	.....	.....	Tschernischef.
Ekaterinburg	29.19	741.5	30.26	768 5	— 1.3	—18.5	80	SE	13	6	.....	.....	10	.....	.....	.....	.....	.....	Meteorogical Obs.
Nukuss	.....	.....	30.07	763.6	28.9	— 1.7	74	WNW	4	2	.....	.....	1	.....	.....	.....	.....	.....	
Kasaly	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Bobrof.
Tashkend	28.42	721.9	30.23	767.8	30.6	— 0.8	92	Calm	0	0	.....	.....	0	.....	.....	.....	.....	.....	Michelson.
Barnaul	.....	.....	30.53	775.5	-30.1	—34.5	84	Calm	0	0	.....	.....	0	.....	.....	.....	.....	.....	Meteorological Obs.
Yeniseisk	.....	.....	30.26	768.3	—22.9	—30.5	71	Calm	0	0	.....	.....	0	.....	.....	.....	.....	.....	Marks.
Irkutsk	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Usolzef.
Peking, (China)	.....	.....	30.20	767.1	21.2	— 6.0	93	Calm	0	0	.....	.....	7	.....	.....	.....	.....	.....	Physical Observatory.
Nertchinsk	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Meteorological Obs.
Vladivostock	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Nikolaievsk, on the Amoor	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols; they omit the rain-fall. The elevation of Tiflis is 409 meters, or 1,341.8 feet; Ekaterinburg, 306.4? m., or 1,005.2? ft.; Tashkend, 494.2? m., or 1,621.3? ft.; Irkutsk, 392 m., or 1,286 ft.; Nertchinsk, 592.0? m., or 1,942.2? ft.

SPANISH SERIES.

Furnished by the coöperation of Antonio Aguilar, Director of the Royal Observatory at Madrid, and of Don Cecilio Pujazon, Captain R. N. Director of the Naval Observatory at San Fernando.

Madrid	.....	.....	30.45	773.5	50.0	10.0	63	S	3.0	1.33	.....	4	0	S	.....	0	0	Solar halo....	Royal Observatory.
San Fernando	.....	.....	30.40	772.1	64.2	17.9	60	E	20.4	9.1	.....	0	7	.....	E	.....	.....	.....	Naval Observatory.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

Note.—The originals give the weather in general terms, as published; rain-fall for San Fernando from preceding to following midnight; wind-velocity for Madrid in kilometers per hour.

SWEDISH SERIES.

Furnished by the coöperation of Professor R. Rubenson, Director of the Royal Swedish Meteorological Institute, at Stockholm, and of Dr. H. H. Hildebrandsson, Chief of the Meteorological Division of the Upsala Observatory.

Haparanda	.....	.....	29.58	751.4	24.1	— 4.4	95	S	.....	.....	2	.....	4	.....	.....	0.39	10.	.....	
Umea	.....	.....	29.54	750.4	10.4	—12.0	100	Calm	.....	.....	0	.....	0	.....	.....	0.035	0.9	.....	
Hernosand	.....	.....	29.64	752.9	30.9	— 0.6	81	SW	.....	.....	2	.....	2	.....	.....	0	0	.....	
Stockholm	.....	.....	29.80	757.0	31.5	— 0.3	83	WSW	.....	.....	2	.....	0	.....	.....	0.004	0.1	.....	
Wisby	.....	.....	29.94	760.5	32.4	0.2	92	WNW	.....	.....	1	.....	0	.....	.....	0.075	1.9	.....	
Sub-Series.																			
Upsala	.....	.....	29.79	756.7	32.4	0.2	64	WSW	6.7	3.0	.....	.....	0	.....	.....	0.043	1.10	.....	Dr. Hildebrandsson.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

Note.—The originals give the wind-force by the scale 0 to 6, and Upsala also velocity in meters per second; occasionally, the weather by the Vienna symbols, or in general terms; no distinction between the amount of upper and lower clouds. The rain-fall is measured at 8 a. m., local time.

SWISS SERIES.

Furnished by the coöperation of Professor R. Wolf, Director of the Observatory at Zurich, and of Professor E. Plantamour, Director of the Observatory at Geneva.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Geneva	29.02	737.2	30.50	774.6	39.7	4.3	51	NNE	.....	.....	4	.....	1	.....	.....	0.016	0.4	Clear	The Observatory.
Zurich	28.83	732.3	30.52	775.2	39	3.9	65	W	.....	.....	1	.....	4	.....	.....	0	0	Fair	The Observatory.
.....																			
.....																			

NOTE.—For Geneva the corresponding departures from the normal values are: Barometer, +10.3 mm; Thermometer, +1.6 cent.; Relative Humidity, —23 per cent.

NOTE.—The rain-fall is measured at Zurich at 7 a. m. on the following day. The originals give the barometer corrected but not reduced to sea-level; the wind-force by the scale 0 to 4 for Zurich; the amount of cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The elevation of Geneva is 408 meters, or 1,339 feet, and that of Zurich 470 meters, or 1,542 feet.

TURKISH SERIES.

Furnished by the coöperation of A. Coumbary, Effendi, Director of the Central Observatory at Constantinople, and of Professor C. V. A. Van Dyck, Superintendent of the Lee Observatory at Beirut.

Constantinople																			
Fao, (Persian Gulf)																			
Salonica																			
Valona																			
Varna																			
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y	.....	.....	29.97	761.1	61.0	16.1	65	ESE	.....	.....	2	.....	8ks,0	.....	NW	0.02	0.5	*D. clouds	Prof. C. V. A. Van Dyck.

NOTE.—The originals give the wind-force by the scale 0 to 7, (except Beirut, by the scale 0 to 12, and Constantinople velocity in meters per second;) the weather in general terms as published; no distinction between upper and lower clouds, and, except Constantinople and Beirut, the amount by the scale 0 to 4. It is assumed that the barometer is reduced to sea-level. * Detached clouds.

CANADIAN SERIES.

Furnished by the coöperation of Professor G. T. Kingston, Director of the Magnetic Observatory at Toronto, and Superintendent of the Meteorological Office of the Dominion of Canada, and the respective Observers. Those marked with a star (*) are also telegraphed daily to the office of the Chief Signal Officer, U. S. Army.

Bathurst, N. B	.....	.....	29.94	760.5	33.2	0.7	82	Calm	0	0	.....	.....	8	.....	.....	.....	.....	.....	Hon. J. Ferguson.
Brockville, Ontario	.....	.....	30.12	765.0	24	— 4.4	.....	SW	1	0.4	.....	Haze	Fog	.....	SW	0	0	Foggy	W. R. Bigg.
*Chatham, N. B	.....	.....	29.96	761.0	29	— 1.7	82	SW	4	1.8	.....	.....	10ks	.....	SW	0	0	Cloudy.....	G. A. Blair.
Charlottetown, P. E. Island	.....	.....	29.98	761.5	27	— 2.8	84	W	10	4.5	.....	2c	0	.....	.....	0	0	Fair.....	H. J. Cundall, C. E.
Cornwall, Ontario	.....	.....	30.11	764.8	27.3	— 2.6	88	SW	.....	.....	1	.....	10s	.....	.....	0	0	Hazy.....	James Smith, M. A.
Dalhousie, N. B	.....	.....	.....	.....	31.3	— 0.4	83	W	.....	.....	1	.....	.....	.....	.....	0	0	Threatening	H. A. Johnson.
Esquimault, B. C	.....	.....	30.32	770.1	37.1	2.8	91	N	.....	.....	.....	0	0	.....	.....	0	0	Clear.....	W. H. Bevis.
*Father Point, Quebec	.....	.....	29.98	761.5	30	— 1.1	89	W	4	1.8	.....	5k	8s	SW	.....	0.15	3.8	Threatening	J. McWilliams.
Fredericton, N. B	.....	.....	30.10	764.5	15.1	— 9.4	89	S	1	0.4	.....	5ck	0	NW	.....	0	0	Fair	Prof. Harrison.
*Fort Garry, Manitoba	.....	.....	30.12	765.0	12	—11.1	92	SW	6	2.7	.....	0	0	.....	.....	0	0	Clear.....	James Stewart.
Goderich, Ontario	.....	.....	30.13	765.3	24.3	— 4.3	95	S	.....	.....	2	.....	10n	.....	.....	0	0	Cloudy.....	H. J. Strang, M. A.
Granton, Ontario	28.94	735.1	30.11	764.8	24.3	— 4.3	.....	Calm	.....	.....	0	.....	Fog	.....	.....	0	0	Foggy	James Grant.
*Halifax, N. S	.....	.....	30.01	762.2	27	— 2.8	87	W	8	3.6	.....	.....	10ks	.....	.....	0	0	Cloudy.....	F. Allison, M. A.
Hamilton, Ontario	.....	.....	30.16	766.1	20.2	— 6.6	73	SW	.....	.....	2	8cs	0	.....	.....	0	0	Cloudy.....	G. Dickson.
Heart's Content, N. F	.....	.....	29.77	756.1	28	— 2.2	88	W	.....	.....	3	.....	10	.....	.....	0.08	2.0	Overcast.....	E. Weedon.
*Kingston, Ontario	.....	.....	30.15	765.8	26	— 3.3	96	Calm	0	0 .	.....	10c	0	.....	.....	0	0	Fair	S. Woods, M. A.
*Montreal, Quebec	.....	.....	30.09	764.3	25	— 3.9	95	W	3	1.3	.....	.....	10n	.....	.....	0	0	Cloudy	C. H. McLeod, C. E.
*Ottawa, Ontario	.....	.....	30.13	765.3	23	— 5.0	73	W	4	1.8	.....	.....	10s	.....	SW	0	0	Threatening	J. B. Haney.
*Parry Sound, Ontario	.....	.....	30.09	764.3	26	— 3.3	100	S	4	1.8	.....	.....	Fog	.....	S	0	0	Foggy.....	Rev. R. Mosley.
Port Dover, Ontario	.....	.....	30.14	765.5	17	— 8.3	98	NW	7	3.1	.....	.....	Fog	.....	NW	0	0	Foggy.....	H. Morgan.
Port Hastings, N. S	.....	.....	29.98	761.5	30.6	— 0.8	.....	NW	2	0.9	.....	.....	.....	.....	.....	0	0	Fine	Peter Grant.
Port Stanley, Ontario	.....	.....	30.17	766.3	19	— 7.2	100	W	1	0.4	.....	.....	Fog	.....	.....	0	0	Foggy	M. Payne.
*Quebec, Quebec	.....	.....	30.09	764.3	25	— 3.9	87	SW	6	2.7	.....	.....	Fog	.....	.....	0	0	Foggy	Capt. Ashe, R. N.
*Rockliffe, Ontario	.....	.....	30.07	763.8	26	— 3.3	92	NW	3	1.3	.....	.....	10s	.....	W	0	0	Cloudy.....	
St. John, N. B	.....	.....	30.11	764.8	20	— 6.7	87	NW	4	1.8	.....	0	0	.....	.....	0	0	Clear	G. Murdoch, C. E.
*Saugeen, Ontario	.....	.....	30.08	764.0	24	— 4.4	93	Calm	0	0	.....	.....	Haze	.....	.....	0	0	Hazy	K. Stewart.
Stayner, Ontario	.....	.....	30.12	765.0	19	— 7.2	99	SE	3	1.3	.....	.....	Fog	.....	SE	0	0	Foggy	R. J. Cole.
Stratford, Ontario	28.75	730.2	30.13	765.3	16.4	— 8.7	98	SW	2	0.9	.....	.....	Fog	.....	.....	0	0	Foggy.....	C. J. MacGregor, M. A.
*Sydney, C. B	.....	.....	29.95	760.7	29	— 1.7	82	W	6	2.7	.....	2ck	0	NW	.....	0	0	Clear	T. C. Hill.
*Toronto, Ontario	.....	.....	30.13	765.3	25	— 3.9	92	NW	2	0.9	.....	.....	Fog	.....	.....	0	0	Foggy	Magnetic Observatory.
Woodstock, Ontario	.....	.....	30.14	765.5	16.1	— 8.8	97	NW	6	2.7	.....	.....	10s	.....	.....	0	0	Cloudy.....	J. Montgomery.
Sub-Series.																			
St. Johns, Newfoundland	.....	.....	29.83	757.7	27.0	— 2.8	.....	W	.....	.....	.....	.....	0	.....	.....	Inap.	Inap.	Fair.....	John Delany.
.....																			
.....																			
.....																			
.....																			

NOTE.—The originals for Brockville, Charlottetown, Port Dover, Port Stanley, Stayner, St. Johns, N. F. and those telegraphed, give the amount of cloudiness by the scale 0 to 4. The elevation of Granton is 1,015 feet, or 309.4 m.; Stratford, 1,182 feet, or 360.3 m

UNITED STATES SERIES.

Furnished by the coöperation of Bvt. Brig. Gen. Albert J. Myer, Chief Signal Officer, U. S. Army.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain fall or melted snow in the past 24 hours. Inches.	Rain fall or melted snow in the past 24 hours. Millimeters.	Weather	Observer.
Albany, N. Y.	.....	.....	30.22	767.6	20	— 6.7	72	Calm	0	0	.....	0	Haze	.....	.....	0	0	Clear	
Alpena, Mich.	.....	.....	30.08	764.0	28	— 2.2	88	SW	4	1.8	.....	.....	10s	.....	.....	0	0	Cloudy	
Atlantic City, N. J.	.....	.....	30.18	766.6	32	0.0	89	NE	4	1.8	.....	1cs	0	.....	.....	0	0	Clear	
Augusta, Ga.	.....	.....	30.18	766.6	49	9.4	93	N	5	2.2	.....	.....	10s	.....	N	1.72	43.7	Cloudy	
Baltimore, Md.	.....	.....	30.19	766.8	36	2.2	80	Calm	0	0	.....	5ck	2s, fg	.....	.....	0	0	Cloudy	
Barnegat, N. J.	.....	.....	30.18	766.6	30	— 1.1	89	N	4	1.8	.....	2k	0	W	.....	0	0	Fair	
Bismarck, Dakota	28.37	720.6	30.13	765.3	20	— 6.7	70	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Boston, Mass.	.....	.....	30.14	765.5	29	— 1.7	78	SW	9	4.0	.....	10cs	Sm'e	W	.....	Inap.	Inap.	Cloudy	
Breckenridge, Minn.	.....	.....	30.27	768.8	10	—12.2	80	W	6	2.7	.....	0	0	.....	.....	0	0	Clear	
Buffalo, N. Y.	.....	.....	30.08	764.0	27.5	— 2.5	77	Calm	0	0	.....	5c	Haze	.....	.....	0	0	Fair	
Burlington, Vt.	.....	.....	30.13	765.3	24	— 4.4	73	S	5	2.2	.....	2c	5s	.....	.....	0	0	Cloudy	
Cairo, Ill.	.....	.....	30.26	768.6	33	0.6	89	NW	6	2.7	.....	0	Fog	.....	.....	0	0	Clear	
Cape Hatteras, N. C.	.....	.....	29.95	760.7	48	8.9	100	NE	22	9.8	.....	.....	10n	.....	.....	2.08	52.8	Heavy rain	
Cape Henry, Va.	.....	.....	30.13	765.3	40	4.4	100	NE	18	8.0	.....	.....	10n	.....	.....	0.40	10.2	Light rain	
Cape Lookout, N. C.	.....	.....	29.99	761.7	48	8.9	93	N	11	4.9	.....	.....	10s	.....	N	0.93	23.6	Clearing	
Cape May, N. J.	.....	.....	30.18	766.6	35	1.7	80	E	8	3.6	.....	0	5s	.....	SW	0	0	Fair	
Charleston, S. C.	.....	.....	30.12	765.0	50	10.0	86	NW	8	3.6	.....	.....	10s	.....	.....	0.14	3.6	Threatening	
Cheyenne, Wyoming	24.21	614.9	30.15	765.8	19	— 7.2	100	W	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Chicago, Ill.	.....	.....	30.15	765.8	32	0.0	90	SW	6	2.7	.....	.....	Fog	.....	.....	0	0	Foggy	
Cincinnati, Ohio	.....	.....	30.10	764.5	36	2.2	80	NW	4	1.8	.....	0	Fog	.....	.....	0	0	Clear	
Cleveland, Ohio	.....	.....	30.14	765.5	25.5	— 3.6	100	W	4	1.8	.....	.....	Fog	.....	.....	0	0	Foggy	
Corsicana, Tex.	.....	.....	30.30	769.6	42	5.6	74	N	6	2.7	.....	5cs	0	.....	.....	0	0	Fair	
Davenport, Iowa	.....	.....	30.21	767.3	34	1.1	90	W	4	1.8	.....	.....	Fog	.....	.....	0	0	Foggy	
Denison, Tex.	.....	.....	30.34	770.6	41	5.0	82	N	6	2.7	.....	0	0	.....	.....	0	0	Clear	
Denver, Col.	25.04	636.0	30.26	768.6	20	— 6.7	70	S	5	2.2	.....	0	0	.....	.....	0.10	2.5	Clear	
Detroit, Mich.	.....	.....	30.13	765.3	23	— 5.0	100	W	5	2.2	.....	.....	Fog	.....	.....	0	0	Foggy	
Dodge City, Kan.	27.71	703.8	30.16	766.1	28	— 2.2	88	N	12	5.4	.....	0	2s	.....	.....	0	0	Clear	
Dubuque, Iowa.	.....	.....	30.19	766.8	35	1.7	90	Calm	0	0	.....	.....	10s	.....	.....	0	0	Cloudy	
Duluth, Minn.	.....	.....	30.14	765.5	35	1.7	90	SW	4	1.8	.....	.....	10s	.....	.....	0.01	0.3	Cloudy	
Eastport, Me.	.....	.....	30.07	763.8	29	— 1.7	78	W	9	4.0	.....	10c	Haze	W	W	0	0	Cloudy	
Erie, Pa.	.....	.....	30.09	764.3	23	— 5.0	86	SW	6	2.7	.....	8c	Haz	W	.....	0	0	Fair	
Escanaba, Mich.	.....	.....	30.07	763.8	32	0.0	79	Calm	0	0	.....	.....	10s	.....	.....	0	0	Cloudy	
Fort Gibson, Indian Ter.	.....	.....	30.30	769.6	29	— 1.7	88	W	1	0.4	.....	0	0	.....	.....	0	0	Clear	
Ft. St. Michael, Alaska	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Fort Sill, Indian Ter.	29.10	739.1	30.20	768.6	43	6.1	67	NW	8	3.6	.....	5cs	0	W	.....	0	0	Fair	
Fort Sully, Dakota.	28.57	725.7	30.33	770.4	29	— 1.7	77	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Florence, Arizona	28.51	724.1	30.04	763.0	55	12.8	.....	NW	.....	.....	.....	0	0	.....	.....	0	0	Clear	
Galveston, Tex.	.....	.....	30.26	768.6	56	13.3	74	N	6	2.7	.....	5c	0	W	.....	0	0	Fair	
Grand Haven, Mich.	.....	.....	30.12	765.0	35	1.7	80	W	11	4.9	.....	.....	Fog	.....	.....	0.04	1.0	Foggy	
Indianapolis, Ind.	.....	.....	30.19	766.8	30	— 1.1	89	NW	5	2.2	.....	.....	10s,sm'	.....	.....	0	0	Cloudy	
Indianola, Tex.	.....	.....	30.32	770.1	55	12.8	80	NW	7	3.1	.....	5c	0	.....	.....	0	0	Fair	
Jacksonville, Fla.	.....	.....	30.08	764.0	62	16.7	88	Calm	0	0	.....	.....	10s	.....	.....	0.04	1.0	Cloudy	
Keokuk, Iowa.	.....	.....	30.19	766.8	34	1.1	100	NW	4	1.8	.....	.....	Fog	.....	.....	0	0	Foggy	
Key West, Fla.	.....	.....	30.09	764.3	68	20.0	94	N	6	2.7	.....	0	8ks	.....	.....	0	0	Threatening	
Kittyhawk, N. C.	.....	.....	30.09	764.3	44	6.7	100	NE	16	7.2	.....	.....	10n	.....	.....	1.19	30.2	Light rain	
Knoxville, Tenn.	.....	.....	30.13	765.3	47	8.3	77	S	8	3.6	.....	.....	10s	.....	.....	0.14	3.6	Cloudy	
La Crosse, Wis.	.....	.....	30.21	767.3	35	1.7	100	N	10	4.5	.....	.....	10n	.....	.....	0.03	0.8	Light rain	
Leavenworth, Kan.	.....	.....	30.33	770.4	31	— 0.6	94	NW	5	2.2	.....	0	0	.....	.....	0	0	Clear	
Louisville, Ky.	.....	.....	30.18	766.6	34	1.1	89	NW	5	2.2	.....	0	0	.....	.....	0.11	2.8	Clear	
Lynchburg, Va.	.....	.....	30.17	766.3	40	4.4	80	Calm	0	0	.....	.....	10s	.....	.....	0.04	1.0	Cloudy	
Malone, N. Y.	.....	.....	30.07	763.8	19	— 7.2	85	SW	2	0.9	.....	8cs	0	NW	.....	0	0	Cloudy	
Marquette, Mich.	.....	.....	30.06	763.5	38	3.3	71	NW	4	1.8	.....	.....	10s	.....	.....	0	0	Cloudy	
Memphis, Tenn.	.....	.....	30.20	769.4	38	3.3	80	NW	3	1.3	.....	0	Sm'e	.....	NW	0.04	1.0	Clear	
Milwaukee, Wis.	.....	.....	30.16	766.1	31	— 0.6	100	W	2	0.9	.....	.....	Fog	.....	.....	0	0	Dense fog	
Mobile, Ala.	.....	.....	30.19	766.8	51	10.6	86	N	8	3.6	.....	.....	10s	.....	N	0	0	Cloudy	
Montgomery, Ala.	.....	.....	30.18	766.6	52	11.1	86	N	10	4.5	.....	.....	10s	.....	N	0	0	Cloudy	
Morgantown, W. Va.	29.98	736.1	30.06	763.5	39	3.9	81	Calm	0	0	.....	.....	10n	.....	NE	Inap.	Inap.	Light rain	
Mt. Washington, N. H.	23.70	602.0	30.06	763.5	20	— 6.7	70	NW	36	16.1	.....	8cs	0	.....	.....	0	0	Fair	
Nashville, Tenn.	.....	.....	30.20	767.1	41	5.0	82	NW	3	1.3	.....	.....	10s	.....	NW	0.22	5.6	Cloudy	
New Haven, Conn.	.....	.....	30.18	766.6	33	0.6	69	W	3	1.3	.....	0	Fog	.....	.....	0	0	Fair	
New London, Conn.	.....	.....	30.19	766.8	33	0.6	79	Calm	0	0	.....	5ck	0	SW	.....	0	0	Fair	
New Orleans, La.	.....	.....	30.18	766.6	52	11.1	79	N	12	5.4	.....	.....	10s	.....	N	0	0	Cloudy	
Newport, R. I.	.....	.....	30.18	766.6	33	0.6	79	SW	6	2.7	.....	0	7ks	.....	W	0	0	Fair	
New York, N. Y.	.....	.....	30.20	767.1	34	1.1	69	SW	2	0.9	.....	0	Sm'e	.....	SW	0	0	Clear	
Norfolk, Va.	.....	.....	30.13	765.3	41	5.0	91	NE	10	4.5	.....	.....	10n	.....	NE	0.49	12.4	Light rain	
North Platte, Neb.	27.30	695.7	30.14	765.5	25	— 3.9	100	W	8	3.6	.....	0	0	.....	.....	0	0	Clear	
Omaha, Neb.	29.17	740.0	30.32	770.1	30	— 1.1	78	NW	6	2.7	.....	0	0	.....	.....	0	0	Clear	
Oswego, N. Y.	.....	.....	30.12	765.0	22.5	— 5.4	85	SE	4	1.8	.....	5cs	2s	.....	.....	0	0	Fair	
Pembina, Dakota	.....	.....	30.15	765.8	10	—12.2	90	SE	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Philadelphia, Pa.	.....	.....	30.20	767.1	32	0.0	79	W	2	0.9	.....	1c	Sm'e	W	.....	0	0	Clear	
Pike's Peak, Col.	17.69	449.3	29.90	759.4	3	—16.1	100	SW	13	5.8	.....	.....	Fog	.....	.....	0.07	1.8	Foggy	
Pittsburgh, Pa.	.....	.....	30.06	763.5	35	1.7	80	NE	1	0.4	.....	.....	Fog	.....	.....	0	0	Foggy	
Port Huron, Mich.	.....	.....	30.11	764.8	22	— 5.6	100	W	4	1.8	.....	.....	Fog	.....	.....	0	0	Foggy	
Portland, Me.	.....	.....	30.09	764.3	30	— 1.1	78	Calm	0	0	.....	10cs	Haz.	W	.....	0	0	Cloudy	
Portland, Oregon	.....	.....	30.22	767.6	38	3.3	90	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Punta Rassa, Fla.	.....	.....	30.10	764.5	66.6	19.2	94	SE	3	1.3	.....	0	8s	.....	SE	0	0	Fair	
Rochester, N. Y.	.....	.....	30.08	764.0	25	— 3.9	75	SW	9	4.0	.....	8c	Sm'e	W	.....	0	0	Fair	
Salt Lake City, Utah	.....	.....	30.08	764.0	25	— 3.9	75	SW	9	4.0	.....	.....	0	.....	.....	0	0	Clear	
Sandy Hook, N. J.	25.89	657.6	30.22	767.6	28	— 2.2	88	NE	8	3.6	.....	0	0	.....	.....	0	0	Clear	
San Diego, Cal.	.....	.....	30.15	765.8	34	1.1	79	W	2	0.9	.....	0	0	.....	.....	0	0	Fair	
San Francisco, Cal.	.....	.....	30.12	765.0	53	11.7	38	NE	2	0.9	.....	5c	0	NE	.....	0	0	Clear	
Santa Fé, N. M.	.....	.....	30.15	765.8	51	10.6	89	N	8	3.3	.....	0	0	.....	.....	0	0	Cloudy	
Savannah, Ga.	23.30	591.8	29.84	757.9	29	— 1.7	48	N	7	3.1	.....	.....	10s	.....	.....	Inap.	Inap.	Cloudy	
Shreveport, La.	.....	.....	30.11	764.8	53	11.7	93	N	12	5.4	.....	.....	10s	.....	N	0.04	Inap.	Cloudy	
Smithville, N. C.	.....	.....	30.33	770.4	43	6.1	92	NW	1	0.4	.....	0	Sm'e	.....	.....	0	1.0	Clear	
Springfield, Mass.	.....	.....	30.04	763.0	44	6.7	92	N	8	3.6	.....	.....	10s	.....	N	0.46	11.7	Cloudy	
St. Louis, Mo.	.....	.....	30.17	766.3	20	— 1.7	67	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
St. Marks, Fla.	.....	.....	30.28	769.1	20	— 1.7	79	NW	4	1.8	.....	.....	Fog	.....	.....	0	0	Foggy	
St. Paul, Minn.	.....	.....	30.11	764.8	55	12.8	93	N	8	3.6	.....	.....	10s	.....	.....	Inap.	Inap.	Cloudy	
St. Paul's Island, Alaska	.....	.....	30.18	766.6	32	0.0	89	W	4	1.8	.....	0	5s	.....	W	Inap.	Inap.	Fair	
Thatcher's Island, Mass.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Toledo, Ohio.	.....	.....	30.11	764.8	31	— 0.6	68	SW	16	7.2	.....	2cs	5s	W	W	0	0	Clearing	
Tucson, Arizona.	.....	.....	30.13	765.3	20	— 1.7	89	W	6	2.7	.....	.....	10s	.....	W	0	0	Cloudy	
Tybee Island, Ga.	27.66	702.6	30.20	767.1	25	— 3.9	.....	S	.....	.....	.....	1c	0	W	.....	0	0	Clear	
Vicksburg, Miss.	.....	.....	30.07	763.8	52	11.1	93	N	10	7.2	.....	.....	10ks	.....	N	0.30	7.6	Cloudy	
Virginia City, M. T.	.....	.....	30.30	769.6	40	4.4	100	N	2	0.9	.....	.....	Fog	.....	N	0	0	Foggy	
Washington, D. C.	24.48	621.8	29.96	761.0	16	— 8.9	66	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Wilmington, N. C.	.....	.....	30.19	766.8	35.5	1.9	90	SE	3	1.3	.....	.....	10n	.....	SW	Inap.	Inap	Light rain	
	.....	.....	30.05	763.3	44	6.7	92	NW	7	3.1	.....	.....	10s	.....	NW	0.34	8.6	Cloudy	

UNITED STATES SERIES.—CONTINUED.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Upper. 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Wood's Holl, Mass.	.....	.....	30.21	767.3	35	1.7	70	SW	8	3.6	.....	5c	5s	.....	W	0	0	Cloudy	
Yankton, Dakota	29.03	737.3	30.40	772.1	27	— 2.8	76	W	3	1.3	.....	0	0	.....	.....	0	0	Clear	
Yuma, Arizona	.....	.....	30.24	768.1	54	12.2	.....	NW	.....	.....	.....	0	0	.....	.....	0	0	Clear	
Sub-Series.																			
Kingston, Jamaica, W. I.	.....	.....	30.22	767.6	74	23.3	81	N	8	3.6	.....	8c	8n	NE	.....	0	0	.....	James Gall.
Navassa, W. I.	.....	.....	.....	.....	76	24.4	.....	NE	.....	.....	2	.....	.....	.....	.....	0.35	8.9	.....	Dr. G. H. Davison.
Clifton, Ja., W. I.	27 21	691.1	30.03	762.7	62	16.7	78	E	1.0	0.4	.....	5c	5k	E	.....	0	0	Dull	C. Partridge.
Paramaribo, D. Guiana, S. A	.....	.....	30.08	762.7	78	25.6	86	E	.....	.....	2	5ck	7ks	E	.....	0	0	½ cloudy	C. J. Hering.
Batavia, Dutch Guiana, S. A.	30.07	763.8	.....	.....	81.5	27.5	.....	E	.....	.....	.....	.....	.....	.....	.....	0	0	½ cloudy	Dr. H. Groot.
Medellin, Colombia, S. A.	25.22	640 6	.....	.....	65 5	18.6	84	Calm	.....	.....	0	10c 8	0	.....	.....	0	0	Cloudy	Thomas Herran.
York Factory, B. A.	.....	.....	29.72	754.9	20.0	—12.2	90	S	32	14.3	.....	.....	9s	.....	.....	0.02	0.5	Snowing	J. Fortescue, W. Wood
Honolulu, Oahu, H. I.	.....	.....	30.10	764.5	70	21.1	95	NE	.....	.....	5	.....	.....	.....	.....	0.10	2.5	Drizzling	Daniel Smith.
Makawao, Maui, H. I.	.....	.....	29.99	761.7	62	16.7	77	Calm	.....	.....	0	1c	0	S	.....	0	0	.....	F. L. Clarke.

NOTE.—The originals give the amount of cloudiness by the scale 0 to 4, except York Factory, Makawao, Medellin and Paramaribo. The elevation of the barometer at Bismarck is 1,677 feet, or 511.1 meters; Cheyenne, 6,057.3 ft., or 1,846.2 m.; Clifton, about 2,892 ft., or 881.5 m.; Denver, 5,135 ft., or 1,565.2 m.; Dodge City, 2,478.8 ft., or 755.5 m.; Fort Sill, 1,160 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Florence, 1,570 (?) ft., or 472.5 (?) m.; Makawao, 2,205 ft., or 672.1 m.; Morgantown, 1,027.9 ft., or 313.3 m.; Medellin, 4,876 ft., or 1,486.2 m.; Mt. Washington, 6,285 ft., or 1,915.6 m.; North Platte, 2,846 ft., or 867.4 m.; Omaha, 1,054.6 ft., or 321.4 m.; Pike's Peak, 14,150.7 ft., or 4,313.1 m.; Salt Lake City, 4,362.2 ft., or 1,329.6 m.; Santa Fé, 6,862.2 (?) ft., or 2,091.6 (?) m.; Tucson, 2,513 (?) ft., or 772.1 (?) m.; Virginia City, 5,480 (?) ft., or 1,670.3 (?) m.; Yankton, 1,278 ft., or 389.5 m. The following constants are added in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Denver, 5.22 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fé, 6.54 in.; Tucson, 2.59 in.; Virginia City, 5.48 in. The elevation of Batavia is about 6 feet: the barometric readings need the addition of 0.2 mm. or 0.01 in. for reduction to sea-level.

UNITED STATES NAVAL SERIES.

By authority of the **SECRETARY OF THE NAVY.**

Furnished by the coöperation of the Navy Department, through Commodore Daniel Ammen, U. S. N., Chief of Bureau of Navigation.

STATIONS AND VESSELS.	True course toward—	Hourly rate in knots.	*Barometer as reported.		Temperature of the Air.		Relative Humidity.	Wind.				Clouds.				Rain-fall or melted snow in the past 24 hours.		State of Ocean.	Direction of swell from—	Weather.	Observer.
								Direction.	Velocity		Force.	Amount.		Direction.							
												Up'er	Low'r	Up'er	Low'r						
			Inches.	Millimeters.	Fahrenheit.	Centigrade.	Per cent.	From—	Miles per hour.	Meters per second.	0—10.	0—10.	0—10.	From—	From—	Inches.	Millimeters.				
Naval Academy, Annapolis, Md.			29.77	756.1	34	1.1	.....	NW	.....	.....	1	.....	9	.....	.....	0.5	12.7	.....	.....	Cloudy	
Naval Hospital, Annapolis, Md.			30.21	767.3	32	0.0	100	NE	.....	.....	1	.....	5	.....	W	0	0	.....	.....	Fair	
Navy Yard, Mare Island, Cal.			30.20	767.1	47	8.3	100	SW	.....	.....	1	.....	0	.....	.....	0	0	.....	.....	Pleasant	
Navy Yard, Norfolk, Va.			30.28†	769.1†	41	5.0	100	ENE	.....	.....	6	.....	10n	.....	.....	.....	.....	.....	.....	Raining	
Navy Yard, Pensacola, Fla.			30.22	767.6	53	11.7	93	NNW	.....	.....	1	.....	10	.....	SE	0	0	.....	.....	‡D. clouds	
Navy Yard, Portsmouth, N.H.			30.08	764.0	26	— 3.3	.....	WNW	.....	.....	2	.....	.....	.....	S&E	.....	.....	.....	.....	Fine	
¶ Canonicus, New Orleans, La.			29.88†	758.9†	50	10.0	100	NNE	.....	.....	3	.....	10	.....	W	.....	.....	.....	.....	Cloudy	
Colorado, New York, N. Y.			30.30	769.6	34	1.1	.....	SW	.....	.....	2	.....	2	.....	W	0	0	.....	.....	Foggy	
Essex, Hampton Roads, Va.			30.15	765.8	44	6.7	.....	NNE	.....	.....	2	.....	10	.....	S	.....	.....	.....	.....	Raining	
Hartford, Norfolk Va.			30.34	770.6	43	6.1	.....	NE	.....	.....	2	.....	10	.....	.....	0.25	6.3	.....	.....	Rainy	
Michigan, Erie, Pa.			30.20	767.1	22	— 5.6	72	WSW	.....	.....	1	.....	5	.....	SW	.....	.....	.....	.....	Partly cl'dy.	
Monongahela, Baltimore, Md.			30.19	766.8	34	1.1	.....	NE	.....	.....	1	.....	..ks	.....	NE	.....	.....	.....	.....	Hazy	
New Hampshire, Port Royal, S. C.			30.32	770 1	55	12.8	.....	N	.....	.....	2	.....	9	.....	S	Blank	Blank	smooth	.....	‡D. clouds	
Omaha, Panama			30.09	762.7	76.5	24.7	91	NW	.....	.....	3	.....	1	.....	S	0	0	Smooth	.....	Pleasant	
Ossipee, New Orleans, La.			30.21	767.3	60	10.0	.....	N	.....	.....	4	.....	10	.....	NNE	.....	.....	.....	.....	‡D. clouds	
Pensacola, Panama			30.04	763.0	78	25.6	86	NNW	.....	.....	1	.....	1	.....	SW	.....	.....	.....	.....	‡D. clouds	
Plymouth, Pensacola, Fla.			30.18	766.6	56	13.3	75	NNE	.....	.....	6	.....	10	.....	N	.....	.....	Smooth	.....	Cloudy	
¶ Rio Bravo, Matamoras, Mex.			30.05	763.3	52	11.1	93	N	.....	.....	1	.....	3	.....	S	.....	.....	.....	.....	‡D. clouds.	
Santee, Annapolis, Md.			29.79†	756.7†	36	2.2	80	N	.....	.....	1	.....	9	.....	.....	.....	.....	.....	.....	Cloudy	
St. Louis, League Island, Pa.			30.04	763.0	32.6	0.3	.....	NE	.....	.....	1	.....	2	.....	W	0	0	.....	.....	Fair	
Vandalia, Constantinople, Turkey.			30.29	767.8	42	5.6	91	NNE	.....	.....	3	.....	8	.....	.....	.....	.....	.....	.....	‡D. clouds	
Wabash, Boston, Mass.			30.18	766.6	31	— 0.6	.....	W	.....	.....	3	.....	10k,s	.....	.....	.....	.....	.....	.....	‡D. clouds	
Wyoming, Washington, D.C.			30.22†	767.6†	41	5.0	.....	NNE	.....	.....	1	.....	1	.....	NNW	.....	.....	.....	.....	‡D. clouds	

* It is not known that the barometer is corrected for temperature, instrumental error or elevation. † Aneroid Barometer. ‡ Detached clouds. ¶ Barometer corrected for instrumental error and reduced to sea-level.

UNITED STATES MARINE SERIES

REPORTED TO THE OFFICE OF THE CHIEF SIGNAL OFFICER OF THE ARMY.

NAMES OF VESSELS.	TRUE COURSE TOWARD—	HOURLY RATE IN KNOTS.	BAROMETER REDUCED TO SEA-LEVEL.		TEMPERATURE OF THE AIR.		RELATIVE HUMIDITY.	WIND.				CLOUDS.				STATE OF OCEAN.	DIRECTION OF SWELL FROM—	WEATHER.	OBSERVER.
								Direction.	Velocity.		Force.	Amount.		Direction.					
												Up'er	Low'r	Upper.	Lower.				
			Inches.	Millimeters.	Fahrenheit.	Centigrade.	Per cent.	From—	Miles per hour.	Meters per second.	0—10.	0—10.	0—10.	From—	From—				
PACIFIC MAIL S. S. CO. MARINE SERIES. Furnished by the coöperation of ————, President; Williams, Blanchard & Co., Agents.																			
S. S. City of Peking																			Lt. Z. L. Tanner, U.S.N
OCCIDENTAL AND ORIENTAL S. S. CO. MARINE SERIES. Furnished by the coöperation of George H. Bradbury, President; T. H. Goodman, Agent.																			
S. S. Belgic																			Capt. John Metcalf.
S. S. Gaelic																			Capt. W. H. Kidley.
S. S. Oceanic																			Capt. H. Parsell.
NORTH GERMAN LLOYD OF BREMEN MARINE SERIES. Furnished by the coöperation of A. Schumacher & Co., Agents.																			
S. S. Baltimore																			Capt. H. Andressen.
S. S. Berlin																			Capt. C. Pohle.
S. S. Braunschweig																			Capt. K. Undütsch.
S. S. Nürnberg																			Capt. A. Jaeger.
S. S. Ohio																			Capt. G. Meyer.
MARINE SERIES. (Miscellaneous.) Furnished by the coöperation of Captain James Jorgensen.																			
Schooner Addie Fuller, at Brunswick, Ga			30.04	763.0	63	17.2	83	Calm	0	0				10s				Overcast	Capt. James Jorgensen

NOTE.—The schooner Addie Fuller gives the amount of cloudiness by the scale 0 to 4.

COLLATED AT THE OFFICE OF THE CHIEF SIGNAL OFFICER OF THE ARMY, WASHINGTON, D. C.

The records which appear in this Bulletin are copied from the regular exchanges of this office, made in each instance in compliance with an especial request and are published for the uses of the coöperating observers. The barometric readings in the first two columns are reduced to freezing and their respective standards; those in the second two also to mean sea-level. The "weather" is generally published as given.

When the distinction between the upper and lower strata of clouds is not reported, the *kinds* or *types*, viz: cirrus, cumulus, stratus, nimbus, scud, fracto, pallio, haze, fog and smoke, as indicated, respectively, by the letters c, k, s, n, d, f, p, hz., fg. and sm'e, are generally published with the amount in the lower-cloud column. The distinction between the upper and lower strata is carefully made in the United States Series and a portion of the Canadian Series, and the types are indicated by the above letters or their combinations in the proper column.

Albert J. Myer

Brig. Gen. (Bvt. Assg[d],) Chief Signal Officer, U. S. A.

BULLETIN

OF

INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON FEBRUARY 6, 1877.

7:35 A. M. WASHINGTON mean time.

6:7 A. M. MEXICO mean time.
7:7 A. M. SAN JOSE mean time.
0:6 P. M. LISBON mean time.
0:28 P. M. MADRID mean time.
0:43 P. M. GREENWICH mean time.
0:53 P. M. PARIS mean time.
1:1 P. M. BRUSSELS mean time.
1:4 P. M. UTRECHT mean time.
1:13 P. M. BERNE mean time.

10:2 P. M. TOKEI mean time.

1:26 P. M. CHRISTIANIA mean time.
1:33 P. M. COPENHAGEN mean time.
1:33 P. M. ROME mean time.
1:37 P. M. BERLIN mean time.
1:49 P. M. VIENNA mean time.
1:55 P. M. STOCKHOLM mean time.
2:18 P. M. ATHENS mean time.
2:39 P. M. CONSTANTINOPLE mean time.
2:44 P. M. ST. PETERSBURG mean time.

ALGERIAN SERIES.

Furnished by the coöperation of General d'Eudeville, Commandant Supérieur du Génie in Algeria.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Nemours			30.46	773.5	62.6	17.0		N			2		2			0	0	Clear	Michel.
Algiers			30.44	773.2	59.7	15.4		E			1		9			0	0	Hidden	Biscarrat.
La Calle			30.35	771.0	55.4	13.0		NW			4		5			0.118	3.0	Fair	Fleury.
Tunis			30.34	770.6	55.4	13.0		NW			4		7			0.197	5.0	Cloudy	Jacques.
Sfax																			
Saida			30.37	771.3	59.0	15.0		WSW			1		2			0	0	Clear	Millot.
Tebessa			30.28	769.2	37 6	3.1		NW			4		0			Inap.	Inap.	Clear	Bourgeois.
Geriville			30.24	768.0	46.4	8.0		N			2		2			0	0	Clear	Lemaillot.
Laghouat			30.31	769.9	59.0	15.0		N			1		1			0	0	Clear	Guyot.
Biskra			30.46	773.7	51 8	11.0		NW			3		4			0	0	Clear	Kuntz.

NOTE.—In the originals the distinction between the amount of upper and lower clouds is apparently not made. The weather is published as given. The rain-fall is measured at 7 a. m., local time.

AUSTRIAN SERIES.

Furnished by the cooperation of Professor Ferdinand Osnaghi, Director of the Imperial and Royal Central Meteorological Institute at Vienna.

Agram			30.34	770.7	39.6	4.2	53	Calm			0		3			0	0		Prof. Ivan Stozir.
Cracow, I. R. Observatory			30.11	764.7	34.2	1.2	92	W			3		10			0.012	0.3		Dr. Wierzbiski.
Eperies			30.13	765.4	30.4	— 0.6	88	S			3		10			0	0	Foggy	Julius Mikolik.
Gratz	28.99	736 4	30.30	769.5	36.5	2.5	60	E			2		4			0	0		Andreas Rospini.
Hermannstadt	28.73	729.7	30.23	767 8	31.6	— 0.2	74	SSW			3		1			Inap.	Inap.		Prof. Reissenberger
Kremsmünster	28.94	735.0	30.34	770.7	35.2	1.8	71	WNW			3		10			0	0		Prof. C. Wagner.
Lemberg			30.00	762.1	34.2	1.2	94	SW			3		9			0.028	0.7		Dr. T. Stanecki.
Nyiregyhaza																			Habzsuda Daniel.
Pola			30.33	770.4	45.°	7.4	60	WNW			2		8cs			0	0		I.R.Hydrographic Of'ce.
Szegedin			30.27	768.9	37.4	3.0	73	Calm			0		10			0	0		Karl Stancel.
Trieste			30.38	771.7	43.5	6.4	61	WSW			1		0			0	0		Prof. V. Farolfi.
Vienna			30.21	767.4	36.3	2.4	74	W			6		10			0.016	0.4	Snowing	I. R. Central Met. Obs,y.

NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 7 p. m., local time. The elevation of Gratz is 343.5 meters, or 1,126.9 feet; Hermannstadt, 407.8 meters, or 1,337.9 feet; Kremsmünster, 383.6 meters, or 1,258.5 feet.

BELGIAN SERIES.

Furnished by the cooperation of J. C. Houzeau, Director of the Royal Observatory at Brussels.

Arlon			30.39	771.9	39.6	4.2	98	WSW			2		10			0.173	4 4		Royal Observatory.
Brussels			30.20	769.4	47.7	8.7	97	WSW			1		10n		WSW	0.063	1.60	Covered	
Furnes			30.20	769.3	52.0	11.1	88	WSW			6		4			0.004	0.1		
Maeseyck			30.30	769.6	47.1	8.4	99	W			4		10			0.043	1.1	Foggy	

NOTE.—In the originals, the weather is occasionally given in general notes.

BRITISH SERIES

Furnished by the cooperation of Robert H. Scott, Esq., Director of the Meteorological Office, London, Alexander Buchan, Secretary of the Scottish Meteorological Society, Edinburgh, and the respective Observers.

STATIONS.	Barometer. Corrected for instrumental error and temperature. Inches.	Barometer. Corrected for instrumental error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Aberdeen			29.79	756.7	48.0	8.9		SW	16	7.2		7			0	0	*D. clouds	William Boswell.
Ardrossan			29.92	760.0	48	8.9		SW			3	7					*D. clouds	William McNeil.
Armagh, Observatory			30.01	762.2	51.0	10.6		SSW	20	8.9		10					Overcast	S. Call, for Dr. Robinson.
Bidston (Liverpool Obs.)			30.11	764.8	52.1	11.2		SW	20	8.9		10					Overcast	John Hartnup.
Birr Castle, (Parsonstown)			30.09	764.3	53.4	11.9		SW			1	10					Overcast	J. Dreyer.
Bradford			30.08	764.0	50.7	10.4		W			4	10			0.08	2.0	Overcast	J. McLandsborough.
Bridgetown, (Barbados)			30.06	763.5	80.0	26.7		NE			2	6					*D. clouds	Sergt. J. F. Halanen, A.
Cambridge, Observatory			30.23	767.8	51.5	10.8		SW			1–2	10					Overcast	H. Todd. [H.C.
Cardington			30.25	768.3	51.4	10.8		W			1	10					Overcast	John McLaren.
Carlisle																		T. Bell, for J. Cartmell.
Chatham, School M. E.			30.29	769.4	53.0	11.7		W			1	9					Blue sky	Capt. Fellows, R. E.
Dartmoor	28.80	731.5	30.32	770.1	48.0	8.9		SW			4	10					Rain & fog	R. E. Power.
Davos Platz, (Switzerland)	25.99	637.3			31.8	— 0.1	54	E			1	3			0.240	6.10	Hazy	Francis Redford, M. A.
Donaghadee			29.99	761.7	52	11.1		WSW			4	10					Overcast	J. Mac Gowan.
Dover			30.31	769.9	50	10.6		WSW			3	10					Rain & fog	J. Costello.
Eccles, (near Manchester)			30.11	764.8	51.7	10.9		SW	1.6	0.7		10					Gloomy	Thomas Mackereth.
Falmouth, Observatory			30.32	770.1	52.3	11.3		WSW			4	9					Overcast	The Staff.
Fort Napier, (Natal)	27.59	700.8	29.83	757.7	82.0	27.8		E			3	3					*D. clouds	P'vt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.90	759.4	87	30.6		W			1	1					*D. clouds	
Galway, Queen's College			30.02	762.5	47	8.3		SW			4	10					Raining	Prof. A. H. Curtis.
Gibraltar, (Mediterranean)			30.35	770.9	69.2	15.7		E			5	7					*D. clouds	Corpl. C. Aitken, A.H.C.
Glasgow, Observatory			29.88	758.9	49.0	9.4		S			6	10					Squally	Lewis Stuart.
Great Yarmouth			30.20	767.1	52	11.1		W			2	4					Hazy	G. T. Watson.
Greenwich, Royal Obs'y			30.28	769.1	50.6	10.3		SW			2	10					Drizzling	The Staff, for G. B. Airy.
Guernsey			30.38	771.6	52	11.1		SSW			2	8					*D. clouds	Dr. S. E. Hoskins.
Helston			30.34	770.6	53	6.1		SW			2	10n			0.2	5.1	Raining	M. P. Moyle.
Holyhead			30.09	764.3	50	10.0		SSW			5	10					Misty	John Tilston.
Kew, Observatory			30.28	769.1	51.0	10.6		SW	14	6.3		10					Raining	The Staff.
Kingstown			30.08	764.0	56	13.3		W			4	9					Overcast	George Mitchell.
Leicester Museum			30.14	765.5	51.6	10.8		SW			2	5					*D. clouds	Wm. J. Harrison, F.G.S.
Malta, (Mediterranean)			30.07	763.8	63.2	11.8		N			2	8					Raining	Corp'l. P. Bravis, A.H.C.
Nairn			29.68	753.9	51	10.6		WSW			3	8					¾ clouded	W. D. Penny.
Nassau, (Bahamas)			30.07	763.8	73.2	22.9		SE			1	6					*D. clouds	Surg. Maj. Henry.
Nottingham, Observatory			30.14	765.5	52.2	11.3		SW			4	10k,c		SW	0.027	0.6	Overcast	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			30.17	766.3	50.1	10.1		SSW			3	10					Foggy	Rev. Stephen Whitty.
Oxford, Radcliffe Obs'y			30.22	767.6	53	11.7		SW			1	10					Gloomy	J. Lucas.
Plymouth			30.32	770.1	52.5	11.4		W			2	10					Foggy	John Merrifield.
Roche's Point			30.20	767.1	51	10.6		W			3	10					Wet	W. Kennedy.
Saint Ann's Head			30.21	767.3	50	10.0		SW			4	7					Foggy	John C. Walker.
Saint Helier, (Jersey)			30.40	772.1	51.5	10.7		SW			4	8					¾ clouded	A. P. Amy.
Sandwick Manse, (Orkneys)			29.60	751.8	46.6	8.1		SW	20	8.9		10					Raining	Rev. C. Clouston, LL. D.
Scarborough																		F. Shaw.
Scutari Cemetery, (Turkey)			30.16	766.1	34.4	1.3		N			2	9					Rain & snow	Sergt. W. H. Lyne.
Sheffield			30.12	765.0	52.1	11.2		WSW			2	9			0.08	2.20	Overcast	W. F. Cooper.
Silloth Rectory			30.00	762.0	48.7	9.3	95	W			4	10			0.105	2.67	Overcast	Rev. Francis Redford.
Stonyhurst, Observatory			30.10	764.5	48.7	9.3		W			2	10					Overcast	Rev. S. J. Perry.
Stornoway, Lews C., (Hebr.)			29.61	752.1	48	8.9		SW			6	10					Raining	John Smith.
Strathfield Turgiss			30.29	769.4	52.1	11.2		S			1	9					Drizzling	Rev. Charles H. Griffith.
Thurso			29.60	751.8	48	8.9		SSW			2	8					Raining	John Trotter.
Truro, Royal Institution			30.31	769.9	55	12.8		SW			5	10					Raining	W. Newcombe.
Valencia, Observatory			30.15	765.8	52.1	11.2		WSW	30	13.4		10					Misty	The Staff.
SUB-SERIES.																		
Calf of Man, (Isle of Man)																		Henry Mercer.
Cape Good Hope, Obs'y			30.11	764.8	79.8	26.6	60	NW	15	6.7		6	8					The Staff, for E. J. Stone.
Hobart Town, (Tasmania)			30.14	765.5	70.7	21.4	94	S			1		10kr		0	0	Covered	Francis Abbott, F.R.A.S.
Leith, Restalrig Park			29.86	758.4	52.9	11.6		W			4		4k		0	0	Fine	Andrew Gibb.
Mauritius, Observatory			29.81	757.2				NNW	6.2	2.8					1.74	44.2		C. Meldrum.
Melbourne, Observatory			30.03	762.7	63.6	17.6	66	ESE	8	3.6		10			0	0	Dense haze	R. L. J. Ellery.
Monach Lighthouse, (Hebrides)																		J. Youngclause.
North Unst, (Shetland Is.)			29.48	748.8	41	5.0		W			7	5	7	NW				Robert Burnet.

NOTE.—Generally, the originals do not give the relative humidity, rain-fall, or distinction between upper and lower clouds. The originals give the wind direction to 32 points and weather by the Beaufort notation. The originals give the barometer for Aberdeen, Cardington, Galway, Oxford, St. Helier, Sandwick, Scarborough, Stonyhurst, Leith, Monach and North Unst as read off and the amount of cloudiness for Stornoway by the scale 0 to 4. The wind-force is given by the scale 0 to 12 in the official series; 0 to 6 in the sub series; except in lbs. per square foot for Greenwich and Hobart Town. The rain-fall is measured at Aberdeen at 10 a. m.; Bradford, 9 a. m.; Hobart Town, 7:30 a. m.; Nottingham, 6 p. m.; Mauritius, 9 a. m., local time. The elevation of Dartmoor is 1,400 feet, or 426.7 meters; Davos Platz, 5,1052 feet, or 1,556.02 meters; Fort Napier, 2,200 feet, or 670.6 meters. *Detached clouds.

By authority of the MINISTER OF FOREIGN AFFAIRS.

COSTA RICA SERIES.

Furnished by the coöperation of Senor Federico Maison, Director of the Central Office of Statistics and Meteorology.

San José																		

DANISH SERIES.

Furnished by the coöperation of Captain N. Hoffmeyer, Director of the Royal Danish Meteorological Institute at Copenhagen.

Copenhagen			30.02	762.5	36.5	2.5	74	WNW			2	3						
Faröe			30.09	761.3	39.9	4.4	96	W			4	1						
Godthaab, (Greenland)			28.96	735.5	14.7	— 9.6		S			6	10					Snowing	
Stykkisholm, (Iceland)			28.54	724.9	36.5	2.5	89	SW			8	10					Raining	
Thorshavn, (Faröe)			29.27	743.4	46.9	8.3	88	SW			6	7						
Vestervig			29.98	761.4	39.9	4.4	81	WSW			2	6						

NOTE.—The originals give the wind-force by the scale 0 to 6; occasionally, weather by Vienna symbols; no distinction between the amount of upper and lower clouds.

FRENCH SERIES.

Furnished by the co-operation of His Excellency, U. J. Le Verrier, Director of the Paris Observatory, and the respective Observers.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Alençon	.....	.....	30.43	772.8	46.4	8	95	SW	.....	.....	2	.....	10cn	.....	SW	0	0	Covered	Normal School.
Amiens	.....	.....	30.38	771.7	50.4	10.2	85	E	.....	.....	3	.....	8	.....	E	0	0	Very cloudy	Normal School.
Avignon	.....	.....	30.37	771.4	50.0	10	33	N	.....	.....	4	.....	0	.....	.....	0	0	Clear	Normal School.
Bar-sur-Seine	.....	.....	30.48	774.1	46.0	7.8	61	SW	.....	.....	2	.....	10	.....	.....	0	0	Covered	C. Saillard.
Beaumette, (near Angers)	.....	.....	30.51	774.9	51.3	10.7	72	SW	5.4	2.4	.....	.....	.....	.....	W	0	0	.....	Beaumette Observ'tory.
Beauvais	.....	.....	30.44	773.1	50.5	10.3	80	W	.....	.....	3	.....	10	.....	W	0	0	Covered	Normal School.
Besançon	.....	.....	30.55	776.0	41.7	5.4	75	SSW	.....	.....	2	.....	5	.....	W	0	0	Cloudy.....	Normal School.
Bourg en Bresse	.....	.....	30.60	777.3	39.7	4.3	74	N	.....	.....	2	.....	5ck	.....	S	0	0	Cloudy.....	Normal School.
Bourges	.....	.....	30.52	775.2	45.7	7.6	77	W	.....	.....	2	.....	5	.....	NW	0	0	Partly cl'dy	Normal School.
Brest	.....	.....	30.36	771.1	53.4	11.9	83	SW	.....	.....	4	.....	10	.....	SW	0.010	0.25	Misty.	Naval Observatory.
Carcassonne	.....	.....	30.50	774.8	50.0	10	50	W	.....	.....	1	.....	0	.....	.....	0	0	Clear.....	Normal School.
Caen	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Chartres	.....	.....	30.43	772.8	49.6	9.8	79	W	.....	.....	2	.....	7	.....	E	0	0	.....	Normal School.
Châlons-sur-Marne	.....	.....	30.44	773.2	45.0	7.2	88	W	.....	.....	3	.....	10n	.....	.....	0	0	Covered	Normal School.
Clermont	.....	.....	30.52	775.1	45.3	7.4	64	E	.....	.....	1	.....	0	.....	.....	0	0	.....	Puy de Dome Obs'y.
Commercy	.....	.....	30.43	772.9	40.3	4.6	97	WSW	.....	.....	6	.....	10	.....	.....	0.047	1.2	Covered	Normal School.
Commune de Gréasque*	.....	.....	30.39	772.0	48.0	8.9	36	W	.....	.....	2	.....	2	.....	W	0	0	.....	M. Kina.
Grenoble	.....	.....	30.52	775.2	37.2	2.9	55	N	.....	.....	1	.....	0	.....	.....	0	0	Clear	Normal School.
La Roche-sur-Yon	.....	.....	30.56	776.2	50.0	10.0	72	E	.....	.....	2	.....	10	.....	.....	0	0	Covered.....	Normal School.
Le Mans	.....	.....	30.50	774.7	48.2	9	89	WSW	.....	.....	3	.....	5	.....	W	0	0	Cloudy.....	Normal School.
Lons-Le-Saulnier	.....	.....	30.56	776.1	39.4	4.1	70	NNW	.....	.....	1	.....	2	.....	.....	0	0	Slightly cl'dy	Normal School.
Lorient	.....	.....	30.50	774.6	51.1	10.6	72	S	.....	.....	3	.....	8	.....	SE	0.008	0.2	Very cloudy	Naval Observatory.
Mâcon	.....	.....	30.65	778.5	38.7	3.7	75	Calm	.....	.....	0	.....	2	.....	N	0	0	Slightly cl'dy	Normal School.
Metz	.....	.....	30.46	773.7	39.0	3.9	98	SW	.....	.....	3	.....	10	.....	.....	0	0	Covered	M. Schuster.
Mirecourt	.....	.....	30.50	774.7	37.0	2.8	89	SW	.....	.....	2	.....	10	.....	NE	0	0	Covered	Normal School.
Nismes	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0	0	.....	Normal School.
Orleans	.....	.....	30.39	771.9	55.8	13.2	57	W	.....	.....	6	.....	.....	.....	.....	0	0	.....	Normal School.
Paris, Observatory	.....	.....	30.50	774.7	47.8	8.8	86	W	.....	.....	2	.....	8	.....	W	0	0	Very cloudy	Normal School.
Parthenay	.....	.....	30.46	773.6	49.8	9.9	74	W	.....	.....	3	.....	10k	.....	W	0	0	Covered	National Observatory.
Privas	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Rochefort, Observatory	.....	.....	30.47	774.0	47.8	8.8	45	NNE	.....	.....	2	.....	2	.....	NNE	0	0	Slightly cl'dy	Normal School.
Rouen	.....	.....	30.56	776.1	52.3	11.3	61	S	.....	.....	2	.....	8	.....	N	0	0	¾ covered....	Naval Observatory.
Saint Lo	.....	.....	30.42	772.6	52.5	11.4	71	WSW	.....	.....	2	.....	10	.....	W	0	0	Covered	Normal School.
Tarbes	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Villefranche	28.55	725.2	30.45	773.3	50.0	10	72	WSW	.....	.....	2	.....	0	.....	.....	0	0	Clear.....	Normal School.
	.....	.....	30.54	775.8	46.4	8	82	N	.....	.....	1	.....	2	.....	.....	0	0	Slightly cl'dy	Normal School.
Sub-Series.																			
Fort de France, Martinique	.....	.....	29.89	759.2	75.2	24	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	L'Abbé Marchésl.
Marseilles	.....	.....	30.35	770.8	50.5	10.3	39	NW	.....	.....	2	.....	1	.....	.....	0	0	Clear.....	Marseilles Observatory.
Mont-Louis	25.17	639.3	30.48	774.3	41.0	5.0	26	NNW	7.4	3.33	.....	.....	4	.....	NNE	0	0	.....	—. Falguère.
Montsouris, Paris	.....	.....	30.44	773.1	50.2	10.1	78	W	.....	.....	2	.....	10	.....	W	0	0	.....	Montsouris Observatory
Perpignan	.....	.....	30.36	771.1	54.7	12.6	38	N	24.2	10.83	.....	.....	0	.....	.....	0	0	.....	Dr. Fines.
Pic du Midi, (Summit,) H. P.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. Baylac.
Pic du Midi, (Plantade,) H. P.	22.74	577.6	.....	.....	38.3	3.5	.....	N	.....	.....	1	.....	0	.....	.....	0	0	Clear	General de Nansouty.
Saint Maur, (near Paris)	.....	.....	30.45	773.3	50.5	10.3	80	W	.....	.....	1	.....	10	.....	.....	0	0	Covered	E. Renou.
Toulouse	.....	.....	30.56	776.2	45.0	7.2	63	WNW	.....	.....	1	.....	0	.....	.....	0	0	.....	Toulouse Observatory.
Tours	.....	.....	30.50	774.7	48.7	9.3	73	W	.....	.....	1	.....	10	.....	WNW	0	0	.....	C. Marquet.
Versailles, (near Paris)	.....	.....	30.45	773.3	48.6	9.2	84	W	.....	.....	2	.....	10	.....	.....	0	0	Covered	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai)	.....	.....	30.19	766.7	35.6	2.0	84	NW	8.0	3.58	.....	.....	10	.....	.....	0.724	18.4	Rainy	Marc Dechevrens, S. J.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—Generally, the originals give the wind-force by the scale 0 to 7; no distinction between upper and lower clouds, and, in the official series, the amount by the scale 0 to 4 the rain-fall as measured at 7, 8 or 9 a. m., local time; at Clermont, 9 a. m. of the following day; the weather in general terms as published. The elevation of Clermont is 388 meters, or 1,272.9 feet; Commune de Gréasque, 322 meters, or 1,056.4 feet; Tarbes, 308 meters, or 1,010 feet; Mont-Louis, 1,586.40 meters, or 5,204.8 feet; Pic du Midi, (Summit,) 2,877 meters, or 9,439.1 feet; Pic du Midi, (Plantade,) 2,366 meters, or 7,762.6 feet. In correcting the Mont-Louis barometric observations for altitude, the constant 135. millimeters has been added. *Bouches-du-Rhône

GERMAN SERIES.

Furnished by the coöperation of Professor Dr. G. Neumayer, Director of the German Naval Observatory, Hamburg.

Bamberg	.....	.....	30.28	769.0	37.4	3.0	83	WSW	.....	.....	3	.....	10	.....	.....	0.157	4.0	Snowing.....	Prof. T. Hoh.
Berlin	.....	.....	30.17	766.4	44.2	6.8	67	NW	.....	.....	1	.....	2	.....	.....	0.110	2.8	.....	Prof. Arndt.
Bremen	.....	.....	30.11	764.9	38.1	3.4	86	W	.....	.....	4	.....	3	NW	.....	0.083	2.1	.....	Royal University Obs'y.
Carlsruhe	.....	.....	30.39	771.9	37.4	3.0	93	SW	.....	.....	7	.....	10	.....	.....	0.138	3.5	Rain & snow	A. Senz.
Cassel	.....	.....	30.27	768.9	44.6	7.0	85	W	.....	.....	5	.....	10	WSW	.....	0	0	.....	Dr. H. Möhl.
Crefeld	.....	.....	30.26	768.5	46.9	8.3	97	W	.....	.....	2	.....	10	.....	.....	0.08	2.	Foggy	Director Lose.
Emden	.....	.....	30.26	768.6	43.3	6.3	91	SW	.....	.....	2	.....	10	.....	.....	0.079	2.0	.....	Prof. Prestel.
Frankfort on the Main	.....	.....	30.40	772.1	38.3	3.5	91	SSW	.....	.....	1	.....	10	.....	.....	0.012	0.3	Raining.....	Physical Society.
Friedrichshafen	29.01	736.9	30.53	775.5	33.8	1.0	92	SSW	.....	.....	4	.....	10	.....	.....	0.571	14.5	Rain & snow	M. Wilhelm.
Hamburg	.....	.....	30.19	766.9	41.2	5.1	89	WSW	.....	.....	4	.....	3k	.....	.....	0.228	5.8	Clear	Captain F. Hegemann.
Kiel	.....	.....	30.12	765.1	41.7	5.4	80	W	.....	.....	3	.....	5	.....	.....	0.173	4.4	.....	Prof. G. Karsten.
Königsberg, (Prussia)	.....	.....	29.78	756.5	35.6	2.0	82	W	.....	.....	5	.....	2	.....	.....	0.047	1.2	Snowing.....	Prof. E. Luther.
Köslin	.....	.....	30.00	762.1	36.1	2.3	.....	NW	.....	.....	5	.....	8	.....	.....	0	0	.....	H. Müller.
Leipsic	.....	.....	30.24	768.0	41.2	5.1	90	W	.....	.....	3	.....	9	W	.....	0.154	3.9	.....	Prof. Bruhns.
Memel	.....	.....	29.73	755.2	34.2	1.2	87	NW	.....	.....	5	.....	10ks	.....	.....	0.055	1.4	.....	Reinbrecht & Skalweit.
Münster	.....	.....	30.17	766.2	47.8	8.8	90	SW	.....	.....	1	.....	10	.....	.....	0.083	2.1	.....	Prof. E. Heis.
Neufahrwasser	.....	.....	29.88	759.0	37.6	3.1	73	NW	.....	.....	6	.....	7	.....	.....	0	0	.....	A Lothe.
Posen	.....	.....	30.04	762.9	39.9	4.4	78	NW	.....	.....	6	.....	0	.....	.....	0.024	0.6	.....	Dr. Magener.
Strassburg, (in Alsace)	.....	.....	30.45	773.4	37.6	3.1	93	SW	.....	.....	3	.....	10	.....	.....	Inap.	Inap.	Raining.....	Dr. Schur.
Stuttgart	.....	.....	30.41	772.3	37.8	3.2	83	W	.....	.....	1	.....	10	.....	.....	0.094	2.4	Rain & snow	Prof. Schoder.
Thorn	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Dr. Hasenbalg.
Treves, (Trier)	.....	.....	30.30	769.7	40.8	4.9	92	W	.....	.....	3	.....	10	.....	.....	0.161	4.1	Foggy	Prof. Flesch.
Weissenburg, (Bavaria)	28.79	731.3	30.37	771.5	34.5	1.4	83	WSW	.....	.....	4	.....	9	W	.....	0	0	.....	Dr. von Bebber.
Wustrow, Naval School	.....	.....	30.18	766.5	33.6	0.9	100	W	.....	.....	3	.....	10	.....	.....	0.228	5.8	Foggy.....	E. F. Schütz.
German Naval Series.																			
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—The elevation of Friedrichshafen is 413.4 meters, or 1,356.3 feet; Weissenburg, 431 meters, or 1,414.0 ft. In the originals the distinction between the amount of upper and lower clouds is not made. It is not always certain that the remarks in the weather column refer to the moment of observation.

GREEK SERIES.

Furnished by the coöperation of Professor Dr. J. F. Julius Schmidt, Director of the Royal Observatory at Athens.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Athens			30.16	766 0	44 2	6 8		N										Covered	

Note.—The originals give the barometer corrected, but not reduced to sea-level; occasionally the kind of clouds; the weather as published. They omit the humidity, wind-force, amount of cloudiness and rain-fall.

ITALIAN SERIES.

Furnished by the cooperation of His Excellency the Minister of Agriculture, Industry and Commerce, and the respective Observers.

Udine			30.32	770.1	44.1	6.7	37	W	0.7	0.3			0			0	0		Prof. Giovanni Clodig.
Stelvio	22 24	564.8			19.0	— 7.2		SE			1		10			0.008	0.2		Signora Ernesta Manfredi.
Valdobbia	22.30	566.3			21.6	— 5.8	67	W			4		1	NNE		0	0		Ab. Dom. Mongini.
Padua			30.32	770.2	42.6	5.9	63	SSE	1.2	0.6			0			0	0		Prof. Dott. Lorenzoni.
Vicenza			30.33	770.3	44.4	6.9	52	E	1.8	0.8			1			0	0		Conte Alm. Da Schio.
Verona			30.33	770.4	44.8	7.1	64	NE			1		0			0	0		Dott. B. Bertoncelli.
Bergamo	28 95	735.3	30.31	769.9	43.0	6.1	39	S			4		1			0	0		Prof Trionfini Carlo.
Domodossola			30.33	770.3	44.6	7.0	32	Calm			0		1			0	0		Prof. Giuseppe Colza.
Milan			30.38	771.7	41.2	5.1	63	NW			1		0			0	0		Ab. Gio. Capelli
Pavia			30.37	771.3	42.4	5.8	40	NW			2		6	NE		0	0		Prof. Gio. Cantoni.
Moncalieri			30.37	771.4	43.0	6.1	66	SSE	3.1	1.4			1			0	0		Prof. P. F. Denza.
Mondovi	28.39	721.0	30.36	771.1	42.3	5.7	24	WNW			2		1	N		0	0		Prof. D. C. Bruno.
Porto Maurizio			30.39	771.8	54.0	12.2	42	SSE			2		0			0	0		Prof. L. Vassallo.
Genoa			30.34	770.6	54.1	12.3	25	SW	4.2	1.9			0			0	0		Prof. G. M. Garibaldi.
Piacenza			30.38	771.7	41.9	5.5	59	NW	4.9	2.2			1			0	0		Dott. G. Manzi.
Parma			30.35	770.9	42.3	5.7	60	NW			2		1			0	0		Prof. P. Pigorini.
Florence			30.37	771.3	48.2	9.0	49	S			2		0			0	0		Cav. F. Meucci.
Leghorn			30.35	770.9	50.4	10.2	44	N	5.0	2.5			0			0	0		Prof. P. Monte.
Siena	29.08	738.7	30.33	770.4	45.7	7.6	40	N	0	0			2	NW		0	0		Prof. L. Toscani.
Urbino	28.76	730.4	30.38	771.6	40.1	4.5	71	NE			2		3			0.118	3.0	Raining	Prof. P. Serpieri.
Pesaro			30.37	771.5	43.7	6.5	69	NW	23.0	10.3			8	NW		0.047	1.2		Prof. Luigi Guidi.
Ancona			30.34	770 6	45.3	7.4	80	NW			2		3	NW		0.303	7.7		Prof. F. De— Bosis.
Grosseto			30.35	770.9	52.0	11.1	37	NNE			2		2	SE		0	0		Avv. P. Ponticelli.
Rome			30.28	769.1	52.9	11.6	55	N	12.5	5.6			3			0	0		Prof's. P. Secchi & L. Respighi.
Naples, O. U.			30.25	768.3	52.9	11.6	32	NE			2		3	N		0	0		Prof. L. Palmieri.
Lecce			30.19	766.9	47.8	8.8	51	ENE	21.7	9.7			1			0	0		Prof. C. De—Giorgi.
Cosenza			30.26	768.7	48.0	8.9	82	N	3.8	1.7			6			0	0		Prof. F. D. Conti.
Cagliari			30.29	769.4	54.5	12.5	44	NW			1		1			0	0		Prof. A. Pacinotti.
Ilposto, (Sicily)			30.10	764.5	53.6	12.0	80	N			4		8	S		0.556	14.2		Prof. F. Caffero.
Palermo			30.14	765.5	52.2	11.2	55	NNE	17.4	7.8			10			0.488	12.4	Raining	Prof. G. Cacciatore.
Caltanissetta	28.13	714.6	30.15	765.8	42.3	5.7	78	N			6		6	S		0.024	0.6	Light rain	Prof. A. Pagani.
Siracusa			30.12	765.1	53.4	11.9	66	ENE			6		10	ENE		0.382	9.7	Raining	Prof. V. Giuliano.
Sub-Series.																			
Naples, S. R.			30.28	769.2	48.9	9.4	47	NE	4.9	2.2			3	E		0	0		Prof. F. Brioschi

Note.—The originals give the wind-force by the scale 0 to 4, or the velocity in kilometers per hour; generally, no distinction between upper and lower clouds occasionally the weather by the Vienna symbols. The elevation of Stelvio is 2,543.0 meters, or 8,342.9 feet; Valdobbia, 2,548.0 meters or 8,359.3 feet; Bergamo, 379.6 meters, or 1,24 3 feet; Mondovi, 556 meters, or 1,824.2 feet; Siena, 348.5 meters, or 1,143.3 feet; Urbino, 451 meters, or 1,479.7 feet; Caltanissetta, 570.3 meters, or 1,871.0 feet.

JAPANESE SERIES.

Furnished by the coöperation of the Imperial University of Tokei, Japan.

Tokei			30.16	766.1	33	0.6		NW	4	1.8			10			0	0		Prof. P. V. Veeder.

Note.—The originals give the amount of cloudiness by the scale 0 to 4 without distinguishing between upper and lower clouds. The rain-fall is measured at 7 a. m., local time.

MEXICAN SERIES.

By authority of the Secretary of Public Works.

Furnished by the coöperation of Senor Mariano Barcena, Director of the Central Meteorological Observatory in the City of Mexico.

Mexico																		Mariano Barcena. Vicente Reyes. Miguel Perez. (Engineers in charge.)	

Note.—The elevation of Mexico is 2,290 meters, or 7,512.9 feet. The rain-fall is measured at 6 a. m., local time.

NETHERLANDS' SERIES.

Furnished by the cooperation of Professor Buys Ballot, Director of the Royal Meteorological Institute of the Netherlands at Utrecht.

Flushing			30.31	769.8	46.4	8.0		W			4					0.118	3.0		
Groningen			30.15	765.7	43.9	6.6										0.126	3.2		
Helder			30.20	767.0	46.4	8.0		SW			2					0.087	2.2		
Utrecht			30.20	767.9	49.3	9.6	92	WSW			2		10			0.083	2.1	Overcast	

Note.—The originals give the wind-pressure in kilograms per square meter; for Utrecht, they give the weather as published, from which the amount of cloudiness is taken by the scale 0 to 4, without distinguishing between upper and lower clouds. It is assumed that the barometer readings have been reduced to sea-level.

NORWEGIAN SERIES.

Furnished by the coöperation of Professor H. Mohn, Director of the Royal Norwegian Meteorological Institute at Christiania.

Bergen			29.85	758.1	36.0	2.2	72	SSE	15.0	6.7			10			0.512	13.0		
Bröno			29.52	749.9	34.2	1.2	87	Calm	0	0			10			0	0		
Christiania			29.84	757.9	33.8	1.0	77	WSW	6.5	2.8			9			0	0		
Tromsö			29.28	743.7	28.6	— 1.9	78	SW	17.3	8			10			0.20	5.3		

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols. The cloudiness and weather at Bergen refer to 2h., p. m., local time, instead of 1h., p. m.

PORTUGUESE SERIES.

Furnished by the coöperation of J. C. de Brito Capello, Director of the Meteorological Observatory of the Infante Don Luiz at Lisbon.

STATIONS.	Barometer, corrected for instrum'tal error and temperature. Inches.	Barometer, corrected for instrum'tal error and temperature. Millimeters.	Barometer, reduced to sea-level. Inches.	Barometer, reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Angra, (Azores)	.....	.....	30.30	769.7	61.7	16.5	90	S	4.3	1.9	.....	.....	5	.....	.....	0	0	.....	Dr. J. A. Sampaio.
Campo Major	.....	.....	30.39	772.0	59.5	15.3	45	E	9.8	4.4	.....	.....	0	.....	.....	0	0	.....	Dr. A. M. R. dos Santos.
Funchal, (Madeira)	.....	.....	30.37	771.4	64.8	18.2	67	ESE	6.3	2.8	.....	.....	1	.....	.....	0	0	.....	Capt. D. A. de Cunha.
Lisbon	.....	.....	30.43	772.9	56.3	13.5	55	NNE	22.4	10.0	.....	.....	0	.....	.....	0	0	.....	The Observatory.
Ponta Delgada, (Azores)	.....	.....	30.36	771.1	61.5	16.4	83	S	8.7	3.9	.....	.....	3	.....	.....	0	0	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

NOTE.—The originals give the wind-velocity in kilometers per hour; occasionally, the weather by the Vienna symbols; the amount of cloudiness without distinguishing between upper and lower clouds; the barometer corrected but not reduced to sea-level. The rain-fall at Libson is measured at noon, instead of 0 h. 6 m., p. m.

RUSSIAN SERIES.

Furnished by the cooperation of Professor H. Wild, Director of the Imperial Central Physical Observatory of Russia, at St. Petersburg.

Warsaw	.....	.....	29.92	759.9	34.2	1.2	85	WSW	18.	8	.....	.....	10	.....	.....	.....	.....	.....	Astronomical Obs.
Wilna	.....	.....	29.68	753.8	32.0	0.0	89	S	4	2	.....	.....	10	.....	.....	.....	.....	Snowing.....	Astronomical Obs.
Dorpat	.....	.....	29.49	749.1	29.7	— 1.3	90	SSE	7	3	.....	.....	10	.....	.....	.....	.....	Light snow..	Physical Cabinet.
St. Petersburg	.....	.....	29.60	751.9	27.5	— 2.5	91	SSE	13	6	.....	.....	10	.....	.....	.....	.....	.....	Central Physical Obs.
Kuopio	.....	.....	29.45	748.0	25.9	— 3.4	100	S	22	10	.....	.....	10	.....	.....	.....	.....	Snowing.....	Ch. Forsten.
Kieff	.....	.....	29.94	760.5	31.6	— 0.2	66	WNW	7	3	.....	.....	10	.....	.....	.....	.....	.....	Physical Cabinet.
Nikolaiev	.....	.....	30.13	765.4	32.9	0.5	75	SSW	18	8	.....	.....	9	.....	.....	.....	.....	.....	Kurdakof.
Kertch	.....	.....	30.17	766.3	32.7	0.4	70	Calm	0	0	.....	.....	5	.....	.....	.....	.....	.....	Lagorio.
Moscow	.....	.....	29.97	761.3	14.2	— 9.9	87	S	7	3	.....	.....	10	.....	.....	.....	.....	Snowing.....	Meteorological Obs.
Lugan	.....	.....	30.11	764.9	12.9	—10.6	80	SSW	9	4	.....	.....	10	.....	.....	Blank	Blank	.....	Meteorological Obs.
Archangel	.....	.....	29.87	758.8	— 4.4	—20.2	89	SE	22	10	.....	.....	10	.....	.....	.....	.....	.....	Ogorodnikof.
Tiflis	28.73	729.8	30.21	767.3	37.9	3.3	65	S	4	2	.....	.....	9	.....	.....	.....	.....	.....	Physical Observatory.
Astrakhan	.....	.....	30.33	770.4	8.6	—13.0	100	NW	2	1	.....	.....	1	.....	.....	.....	.....	.....	Sebastianof.
Kasan	.....	.....	30.13	765.3	— 4.2	—20.1	87	SW	2	1	.....	.....	1	.....	.....	.....	.....	.....	Physical Cabinet.
Orenburg	.....	.....	30.46	772.1	0.1	—17.7	73	SW	13	6	.....	.....	3	.....	.....	.....	.....	.....	Tschernischef.
Ekaterinburg	29.30	744.2	30.38	771.7	— 9.9	—23.3	77	ESE	7	3	.....	.....	10	.....	.....	.....	.....	.....	Meteorogical Obs.
Nukuss	.....	.....	30.20	767.0	24.1	— 4.4	89	NNE	4	2	.....	.....	1	.....	.....	.....	.....	.....	
Kasaly	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Bobrof.
Tashkend	28.48	723.4	30.28	769.0	31.6	— 0.2	98	Calm	0	0	.....	.....	0	.....	.....	.....	.....	.....	Michelson.
Barnaul	.....	.....	30.7 ?	780.4	—34.8	—37.1	70	Calm	0	0	.....	.....	1	.....	.....	.....	.....	.....	Meteorological Obs.
Yeniseisk	.....	.....	30.39	771.9	—21.5	—29.7	70	NNW	2	1	.....	.....	0	.....	.....	.....	.....	.....	Marks.
Irkutsk	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Usolzef.
Peking, (China)	.....	.....	30.25	768.4	22.3	— 5.4	76	Calm	0	0	.....	.....	0	.....	.....	.....	.....	.....	Physical Observatory.
Nertchinsk	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Meteorological Obs.
Vladivostock	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Nikolaievsk, on the Amoor	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

NOTE.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols; they omit the rain-fall. The elevation of Tiflis is 469 meters, or 1,341.8 feet; Ekaterinburg, 306.4 ? m., or 1,005.2 ? ft.; Tashkend, 494.2 ? m., or 1,621.3 ? ft.; Irkutsk, 392 m., or 1,286 ft.; Nertchinsk, 592.0 ? m., or 1,942.2 ? ft.

SPANISH SERIES.

Furnished by the coöperation of Antonio Aguilar, Director of the Royal Observatory at Madrid, and of Don Cecilio Pujazon, Captain R. N. Director of the Naval Observatory at San Fernando.

Madrid	.....	.....	30.47	773.9	54.1	12.3	47	SW	1.5	0.67	.....	0	0	.....	.....	0	0	Clear	Royal Observatory.
San Fernando	.....	.....	30.38	771.6	64.0	17.8	60	ESE	10.0	8.5	.....	0	2	....	E	.....	.....	.....	Naval Observatory.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

NOTE.—The originals give the weather in general terms, as published; rain-fall for San Fernando from preceding to following midnight; wind-velocity for Madrid in kilometers per hour.

SWEDISH SERIES.

Furnished by the coöperation of Professor R. Rubenson, Director of the Royal Swedish Meteorological Institute, at Stockholm, and of Dr. H. H. Hildebrandsson, Chief of the Meteorological Division of the Upsala Observatory.

Haparanda	.....	.....	29.40	746.8	26.2	— 3.2	100	SE	.....	.....	4	.....	6	.....	.....	0	0	.....	
Umea	.....	.....	29.40	746.8	19.4	— 7.0	89	Calm	.....	.....	0	.....	7	.....	.....	0	0	.....	
Hernosand	.....	.....	29.47	748.4	30.6	— 0.8	94	WNW	.....	.....	4	.....	5	.....	.....	0.083	2.1	.....	
Stockholm	.....	.....	29.66	753.1	31.3	— 0.4	59	WNW	.....	.....	6	.....	8	.....	.....	0.035	0.9	.....	
Wisby	.....	.....	29.77	756.2	33.4	0.8	92	NW	.....	.....	7	.....	0	.....	.....	0.161	4.1	.....	
SUB-SERIES.																			
Upsala	.....	.....	29.64	752.8	31.3	— 0.4	63	WNW	11.2	5.0	.....	.....	6	.....	WNW	0.000	0.01	.....	Dr. Hildebrandsson.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

NOTE.—The originals give the wind-force by the scale 0 to 6, and Upsala also velocity in meters per second; occasionally, the weather by the Vienna symbols, or in general terms; no distinction between the amount of upper and lower clouds. The rain-fall is measured at 8 a. m., local time.

SWISS SERIES.

Furnished by the coöperation of Professor R. Wolf, Director of the Observatory at Zurich, and of Professor E. Plantamour, Director of the Observatory at Geneva.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Geneva	29.03	737.4	30.50	774.8	39.0	3.9	49	NE	.....	.....	1	.....	6	.....	.....	0	0	Clouds	The Observatory.
Zurich	28.80	731.4	30.49	774.5	36.9	2.7	67	W	.....	.....	1	.....	10	.....	.....	0.197	5.0	Snowing.....	The Observatory.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Note.—For Geneva the corresponding departures from the normal values are: Barometer, +10.6 mm; Thermometer, +1.1 cent.; Relative Humidity, —25 per cent.

Note.—The rain-fall is measured at Zurich at 7 a. m. on the following day. The originals give the barometer corrected but not reduced to sea-level; the wind-force by the scale 0 to 4 for Zurich; the amount of cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The elevation of Geneva is 408 meters, or 1,339 feet, and that of Zurich 470 meters, or 1,542 feet.

TURKISH SERIES.

Furnished by the coöperation of A. Coumbary, Effendi, Director of the Central Observatory at Constantinople, and of Professor C. V. A. Van Dyck, Superintendent of the Lee Observatory at Beirut.

Constantinople	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Fao, (Persian Gulf)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Salonica	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Valona	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Varna	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y	.....	.....	30.00	762.0	64.4	18.0	67	SW	.....	.....	1	.....	7ks	.....	SW	1.37	34.8	*D. clouds.....	Prof. C. V. A. Van Dyck.

Note.—The originals give the wind-force by the scale 0 to 7, (except Beirut, by the scale 0 to 12, and Constantinople velocity in meters per second;) the weather in general terms as published; no distinction between upper and lower clouds, and, except Constantinople and Beirut, the amount by the scale 0 to 4. It is assumed that the barometer is reduced to sea-level. * Detached clouds.

CANADIAN SERIES.

Furnished by the coöperation of Professor G. T. Kingston, Director of the Magnetic Observatory at Toronto, and Superintendent of the Meteorological Office of the Dominion of Canada, and the respective Observers. Those marked with a star (*) are also telegraphed daily to the office of the Chief Signal Officer, U. S. Army.

Bathurst, N. B	.....	.....	29.84	757.9	19.6	— 6.9	94	NE	6	2.7	.....	.....	10	.....	.....	.....	.....	.....	Hon. J. Ferguson.
Brockville, Ontario	.....	.....	30.02	762.5	30	— 1.1	.....	SW	1	0.4	.....	.....	10s	.....	W	0.01	0.3	Cloudy.....	W. R. Bigg.
*Chatham, N. B	.....	.....	29.82	757.4	22	— 5.6	96	NW	1	0.4	.....	.....	10s	.....	.....	0	0	Cloudy.....	G. A. Blair.
Charlottetown, P. E. Island	.....	.....	29.86	758.4	26	— 3.3	91	E	10	4.5	.....	.....	10s	.....	.....	0	0	Cloudy	H. J. Cundall, C. E.
Cornwall, Ontario	.....	.....	29.99	761.7	29.9	— 1.2	86	W	.....	.....	1	.....	10s	.....	.....	0.03	0.8	Dull	James Smith, M. A.
Dalhousie, N. B	.....	.....	29.89	759.2	18.0	— 7.8	100	E	.....	.....	1	.....	.....	.....	.....	0.10	2.5	Threatening	H. A. Johnson.
Esquimault, B. C	.....	.....	30.11	764.8	41.6	5.3	99	SE	.....	.....	.....	.....	10n	.....	.....	0	0	Cloudy.....	W. H. Bevis.
*Father Point, Quebec	.....	.....	29.80	756.9	22	— 5.6	96	E	12	5.4	.....	.....	10n	.....	.....	0.05	1.3	Light snow..	J. McWilliams.
Fredericton, N. B	.....	.....	29.82	757.4	28.0	— 2.2	88	Calm	0	0	.....	.....	10s	.....	.....	Inap.	Inap.	Light snow..	Prof. Harrison.
*Fort Garry, Manitoba	.....	.....	29.78	756.4	30	— 1.1	89	W	18	8.0	.....	5k	5ks	W	W	0	0	Cloudy	James Stewart.
Goderich, Ontario	.....	.....	30.08	764.0	31.1	— 0.5	95	SW	.....	.....	1	.....	10n	.....	.....	0	0	Cloudy.....	H. J. Strang, M. A.
Granton, Ontario	28.94	735.1	30.10	764.5	24.1	— 4.4	.....	SW	.....	.....	1	.....	10n	.....	.....	Inap.	Inap.	Cloudy.....	James Grant.
*Halifax, N. S	.....	.....	29.85	758.2	30	— 1.1	96	SE	5	2.2	.....	.....	10n	.....	.....	0.010	0.25	Light snow..	F. Allison, M. A.
Hamilton, Ontario	.....	.....	30.13	765.3	33.7	0.9	75	W	.....	.....	2	.....	10n	.....	.....	0	0	Cloudy.....	G. Dickson.
Heart's Content, N. F	.....	.....	30.13	765.3	17	— 8.3	100	NE	.....	.....	2	.....	10	.....	.....	0	0	Overcast.....	E. Weedon.
*Kingston, Ontario	.....	.....	30.10	764.5	31	— 0.6	97	SW	1	0.4	.....	.....	10s	.....	.....	Inap.	Inap.	Cloudy.....	S. Woods, M. A.
*Montreal, Quebec	.....	.....	29.95	760.7	28	— 2.2	88	W	17	7.6	.....	0	2ks	.....	W	Inap.	Inap.	Fair	C. H. McLeod, C. E.
*Ottawa, Ontario	.....	.....	29.99	761.7	25	— 3.9	75	S	2	0.9	.....	0	5ks	.....	S	0.05	1.3	Fair	J. B. Haney.
*Parry Sound, Ontario	.....	.....	30.00	762.0	31	— 0.6	90	S	8	3.6	.....	5k	5ks	S	S	0.03	0.8	Cloudy.....	Rev. R. Mosley.
Port Dover, Ontario	.....	.....	30.12	765.0	30	— 1.1	89	SW	5	2.2	.....	10k	0	SW	.....	0	0	Cloudy	H. Morgan.
Port Hastings, N. S	.....	.....	29.92	760.0	27.9	— 2.3	.....	SE	4	1.8	.....	.....	.....	.....	.....	0.05	1.3	Snowing.....	Peter Grant.
Port Stanley, Ontario	.....	.....	30.13	765.3	31	— 0.6	95	W	10	4.5	.....	.....	10n	.....	W	Inap.	Inap.	Cloudy.....	M. Payne.
*Quebec, Quebec	.....	.....	29.90	759.4	25	— 3.9	87	SW	2	0.9	.....	0	0	.....	.....	0.20	5.1	Clear	Capt. Ashe, R. N.
*Rockliffe, Ontario	.....	.....	29.95	760.7	28	— 2.2	98	E	2	0.9	.....	.....	8s	.....	SW	0.04	1.0	Cloudy.....	
St. John, N. B	.....	.....	29.81	757.2	35	1.7	90	SE	4	1.8	.....	.....	10n	.....	.....	Inap.	Inap.	Overcast.....	G. Murdoch, C. E.
*Saugeen, Ontario	.....	.....	30.01	762.2	31	— 0.6	89	SW	3	1.3	.....	.....	10n	.....	.....	0.02	0.5	Cloudy.....	K. Stewart.
Stayner, Ontario	.....	.....	30.04	763.0	31	— 0.6	80	W	8	3.6	.....	.....	10ks	.....	W	0	0	Cloudy.....	R. J. Cole.
Stratford, Ontario	28 73	729.7	30.07	763.8	28.5	— 1.9	96	SW	8	3.6	.....	.....	10s	.....	.....	0.02	0.5	Cloudy.....	C. J. MacGregor, M. A.
*Sydney, C. B	.....	.....	29.97	761.2	27	— 2.8	93	SE	1	0.4	.....	.....	10n	.....	.....	Inap.	Inap	Light snow..	T. C. Hill.
*Toronto, Ontario	.....	.....	30.10	764.5	33	0.6	88	W	8	3.6	.....	.....	10n	.....	W	0	0	Cloudy.....	Magnetic Observatory.
Woodstock, Ontario	.....	.....	30.10	764.5	31.3	— 0.4	91	SW	6	2.7	.....	.....	10s	.....	.....	Inap	Inap.	Cloudy.....	J. Montgomery.
Sub-Series.																			
St. Johns, Newfoundland	.....	.....	30.20	767.1	15.0	— 9.4	.....	N	.....	.....	.....	.....	10	.....	.....	0.01	0.3	Fair.....	John Delany.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Note.—The originals for Brockville, Charlottetown, Port Dover, Port Stanley, Stayner, St. Johns, N. F. and those telegraphed, give the amount of cloudiness by the scale 0 to 4. The elevation of Granton is 1,015 feet, or 309.4 m.; Stratford, 1,182 feet, or 360.3 m

UNITED STATES SERIES.

Furnished by the coöperation of Bvt. Brig. Gen. Albert J. Myer, Chief Signal Officer, U. S. Army.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er. 0—10.	Clouds. Amount. Low'r. 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain fall or melted snow in the past 24 hours. Inches.	Rain fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Albany, N. Y.	.....	.....	29.99	761.7	31	— 0.6	89	W	24	10.7	.....	.....	10s	.....	.....	0	0	Cloudy	
Alpena, Mich.	.....	.....	29.94	760.5	31	— 0.6	79	SW	12	5.4	.....	0	2ks	.....	SW	Inap.	Inap.	Fair	
Atlantic City, N. J.	.....	.....	30.05	763.3	34	1.1	79	NW	9	4.0	.....	0	Haze	.....	.....	0.03	0.8	Clear	
Augusta, Ga.	.....	.....	30.24	768.1	41	5.0	96	Calm	0	0	.....	.....	Fog	.....	.....	0	0	Foggy	
Baltimore, Md.	.....	.....	30.11	764.8	40	4.4	82	NW	8	3.6	.....	.....	10s	.....	NW	0.06	1.5	Cloudy	
Barnegat, N. J.	.....	.....	30.04	763.0	34	1.1	90	NW	16	7.2	.....	0	0	.....	.....	0.03	0.8	Clear	
Bismarck, Dakota	28.30	718.8	30.05	763.3	21	— 6.1	71	NW	6	2.7	.....	0	0	.....	.....	0	0	Clear	
Boston, Mass.	.....	.....	29.88	758.9	31	— 0.6	68	W	10	4.5	.....	0	Sm'e	.....	.....	0	0	Clear	
Breckenridge, Minn.	.....	.....	30.08	764.0	22	— 5.6	85	W	18	8.0	.....	0	0	.....	.....	0	0	Clear	
Buffalo, N. Y.	.....	.....	30.09	764.3	30.0	— 1.1	89	SW	10	4.5	.....	.....	10s	.....	SW	Inap.	Inap.	Cloudy	
Burlington, Vt.	.....	.....	29.98	761.5	33	0.6	69	N	3	1.3	.....	.....	10s	.....	.....	0	0	Cloudy	
Cairo, Ill.	.....	.....	30.31	769.9	33	0.6	79	N	2	0.9	.....	.....	10s	.....	.....	0	0	Cloudy	
Cape Hatteras, N. C.	.....	.....	30.05	763.3	47	8.3	92	N	9	4.0	.....	.....	10s	.....	N	1.12	28.4	Cloudy	
Cape Henry, Va.	.....	.....	30.11	764.8	40	4.4	100	W	9	4.0	.....	.....	Fog	.....	.....	0.25	6.3	Foggy	
Cape Lookout, N. C.	.....	.....	30.14	765.5	48	8.9	93	Calm	0	0	.....	0	5s	.....	.....	0.01	0.3	Fair	
Cape May, N. J.	.....	.....	30.06	763.5	36	2.2	90	NW	24	10.7	.....	0	0	.....	.....	Inap.	Inap.	Clear	
Charleston, S. C.	.....	.....	30.21	767.3	50	10.0	78	N	4	1.8	.....	.....	10s	.....	.....	0	0	Cloudy	
Cheyenne, Wyoming	24.06	611.1	30.00	762.0	19	— 7.2	76	NW	12	5.4	.....	0	0	.....	.....	0	0	Clear	
Chicago, Ill.	.....	.....	30.11	764.8	35	1.7	90	SW	14	6.3	.....	.....	10s	.....	.....	0	0	Cloudy	
Cincinnati, Ohio	.....	.....	30.18	766.6	35	1.7	80	NW	7	3.1	.....	.....	10s	.....	.....	0	0	Cloudy	
Cleveland, Ohio	.....	.....	30.16	766.1	32	0.0	84	SW	11	4.9	.....	.....	10s	.....	SW	0.01	0.3	Threatening	
Corsicana, Tex.	.....	.....	30.10	766.8	44	6.7	67	NE	3	1.3	.....	2cs	8s	.....	.....	0	0	Cloudy	
Davenport, Iowa	.....	.....	30.14	765.5	32	0.0	89	SW	6	2.7	.....	0	5s	.....	SW	0	0	Fair	
Denison, Tex.	.....	.....	30.22	767.6	43	6.1	75	E	3	1.3	.....	10cs	0	NE	.....	0	0	Cloudy	
Denver, Col.	24.85	631.2	30.07	763.8	28	— 2.2	77	S	2	0.9	.....	.....	10s	.....	.....	0	0	Cloudy	
Detroit, Mich.	.....	.....	30.10	764.5	32	0.0	79	SW	8	3.6	.....	.....	10s	.....	.....	Inap	Inap.	Cloudy	
Dodge City, Kan.	27.57	700.3	29.94	760.5	37	2.8	80	NW	4	1.8	.....	.....	10n	.....	.....	Inap.	Inap.	Light rain	
Dubuque, Iowa	.....	.....	30.05	763.3	32	0.0	79	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Duluth, Minn.	.....	.....	29.74	755.4	36	2.2	70	W	12	5.4	.....	.....	10s	.....	W	0	0	Cloudy	
Eastport, Me.	.....	.....	29.78	756.4	35	1.7	90	Calm	0	0	.....	.....	10s	.....	S	0	0	Cloudy	
Erie, Pa.	.....	.....	30.12	765.0	34	1.1	90	SW	8	3.6	.....	.....	10s	.....	.....	0	0	Cloudy	
Escanaba, Mich.	.....	.....	29.80	756.9	26	— 3.3	76	SW	16	7.2	.....	0	2s	.....	SW	0	0	Clear	
Fort Gibson, Indian Ter.	.....	.....	30.21	767.3	32	0.0	89	SE	1	0.4	.....	5cs	0	W	.....	0	0	Fair	
Ft. St. Michael, Alaska	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Fort Sill, Indian Ter.	28.96	735.6	30.10	764.5	45	7.2	60	N	8	3.6	.....	2cs	5s	W	.....	0	0	Cloudy	
Fort Sully, Dakota	28.40	721.3	30.13	765.3	31	— 0.6	89	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Florence, Arizona	28.49	723.6	30.03	762.7	50	10.0	.....	NW	.....	.....	.....	0	0	.....	.....	0	0	Clear	
Galveston, Tex.	.....	.....	30.18	766.6	53	11.7	86	NE	4	1.8	.....	1c	0	.....	.....	0	0	Clear	
Grand Haven, Mich.	.....	.....	30.06	763.5	36	2.2	80	SW	13	5.8	.....	.....	10s	.....	SW	0.02	0.5	Cloudy	
Indianapolis, Ind.	.....	.....	30.20	767.1	35	1.7	85	W	5	2.2	.....	.....	10s,sn	.....	.....	Inap.	Inap.	Cloudy	
Indianola, Tex.	.....	.....	30.18	766.6	55	12.8	87	E	6	2.7	.....	0	0	.....	.....	0	0	Clear	
Jacksonville, Fla.	.....	.....	30.15	765.8	53	11.7	86	NE	7	3.1	.....	.....	10s	.....	NE	0	0	Cloudy	
Keokuk, Iowa	.....	.....	30.16	766.1	33	0.6	89	SW	6	2.7	.....	0	0	.....	.....	0	0	Clear	
Key West, Fla.	.....	.....	30.03	762.7	69	20.6	95	N	8	3.6	.....	.....	10s	.....	.....	0	0	Cloudy	
Kittyhawk, N. C.	.....	.....	30.13	765.3	41	5.0	100	NE	3	1.3	.....	.....	Fog	.....	.....	0.16	4.1	Dense fog	
Knoxville, Tenn.	.....	.....	30.26	768.6	32	0.0	89	NW	1	0.4	.....	.....	Fog	.....	.....	0	0	Dense fog	
La Crosse, Wis.	.....	.....	29.95	760.7	35	1.7	80	S	14	6.3	.....	0	0	.....	.....	Inap.	Inap.	Clear	
Leavenworth, Kan.	.....	.....	30.22	767.6	29	— 1.7	89	S	4	1.8	.....	5cs	Fog	.....	.....	0	0	Fair	
Louisville, Ky.	.....	.....	30.26	768.6	35	1.7	90	NW	8	3.6	.....	.....	10s	.....	NW	Inap.	Inap.	Cloudy	
Lynchburg, Va.	.....	.....	30.13	765.3	45	7.2	63	NW	8	3.6	.....	0	0	.....	.....	0	0	Clear	
Malone, N. Y.	.....	.....	29.95	760.7	31	— 0.6	79	SW	4	1.8	.....	.....	10s	.....	.....	0.04	1.0	Cloudy	
Marquette, Mich.	.....	.....	29.68	753.9	32	0.0	69	S	12	5.4	.....	0	0	.....	.....	0	0	Clear	
Memphis, Tenn.	.....	.....	30.27	768.8	38	3.3	80	N	4	1.8	.....	0	fg',sm'	.....	N	0	0	Clear	
Milwaukee, Wis.	.....	.....	30.06	763.5	32	0.0	89	SW	16	7.2	.....	10s	Fog	SW	.....	0	0	Cloudy	
Mobile, Ala.	.....	.....	30.19	766.8	44	6.7	92	N	1	0.4	.....	5cs	Fog	NW	.....	0	0	Fair	
Montgomery, Ala.	.....	.....	30.21	767.3	42.5	5.8	87	N	5	2.2	.....	10c	Fog	W	.....	0	0	Cloudy	
Morgantown, W. Va.	29.08	738.6	30.18	766.6	37	2.8	80	Calm	0	0	.....	.....	10s	.....	N	0.07	1.8	Cloudy	
Mt. Washington, N. H.	23.33	592.6	29.69	754.1	7	—13.9	100	NW	54	24.1	.....	.....	Fog	.....	.....	0	0	Foggy	
Nashville, Tenn.	.....	.....	30.26	768.6	36	2.2	90	N	4	1.8	.....	.....	10ks	.....	N	0	0	Cloudy	
New Haven, Conn.	.....	.....	29.97	761.2	34	1.1	70	N	10	4.5	.....	0	5s	.....	N	0	0	Fair	
New London, Conn.	.....	.....	29.93	760.2	34	1.1	69	NW	11	4.9	.....	0	0	.....	.....	0	0	Clear	
New Orleans, La.	.....	.....	30.17	766.3	50	10.0	71	NE	4	1.8	.....	10cs	0	.....	.....	0	0	Cloudy	
Newport, R. I.	.....	.....	29.90	759.4	33	0.6	69	NW	11	4.9	.....	0	0	.....	.....	0	0	Clear	
New York, N. Y.	.....	.....	30.03	762.7	33	0.6	69	NW	8	3.6	.....	0	0	.....	.....	0	0	Clear	
Norfolk, Va.	.....	.....	30.12	765.0	41.5	5.3	100	NW	5	2.2	.....	.....	Fog	.....	.....	0.23	5.8	Foggy	
North Platte, Neb.	27.20	690.9	29.89	759.2	28	— 2.2	89	W	6	2.7	.....	0	2ks	.....	W	0	0	Clear	
Omaha, Neb.	28.96	735.6	30.07	763.8	36	2.2	70	SW	8	3.6	.....	0	0	.....	.....	0	0	Clear	
Oswego, N. Y.	.....	.....	30.07	763.8	34	1.1	85	W	10	4.5	.....	.....	10s	.....	NW	Inap.	Inap.	Threatening	
Pembina, Dakota	.....	.....	29.86	758.4	27	— 2.8	88	W	24	10.7	.....	.....	0	.....	.....	0	0	Clear	
Philadelphia, Pa.	.....	.....	30.08	764.0	35	1.7	70	N	10	4.5	.....	0	2ks	.....	N	0.04	1.0	Clear	
Pike's Peak, Col.	17.56	446.0	29.77	756.1	2	—16.7	100	NE	12	5.4	.....	.....	10n	.....	NE	0.09	2.3	Heavy snow	
Pittsburgh, Pa.	.....	.....	30.15	765.8	35	1.7	85	W	7	3.1	.....	.....	10s	.....	W	Inap.	Inap.	Cloudy	
Port Huron, Mich.	.....	.....	30.06	763.5	32	0.0	84	SW	12	5.4	.....	.....	10s	.....	.....	Inap.	Inap.	Cloudy	
Portland, Me.	.....	.....	29.83	757.7	28	— 2.2	77	W	2	0.9	.....	0	Haze	.....	.....	0	0	Clear	
Portland, Oregon	.....	.....	30.21	767.3	35	1.7	100	S	2	0.9	.....	5c	0	.....	.....	0	0	Fair	
Punta Rassa, Fla.	.....	.....	30.04	763.0	67.0	19.4	97	NE	8	3.6	.....	.....	Fog	.....	.....	Inap.	Inap.	Foggy	
Rochester, N. Y.	.....	.....	30.06	763.5	32	0.0	84	W	10	4.5	.....	.....	10s	.....	W	Inap.	Inap.	Cloudy	
Salt Lake City, Utah	5.82	655.8	30.15	765.8	22	— 5.6	85	E	3	1.3	.....	0	0	.....	.....	0	0	Clear	
Sandy Hook, N. J.	.....	.....	30.00	762.0	33	0.6	79	NW	20	8.9	.....	0	0	.....	.....	0	0	Clear	
San Diego, Cal.	.....	.....	30.14	765.5	49	9.4	87	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
San Francisco, Cal.	.....	.....	30.14	765.5	50	10.0	93	N	1	0.4	.....	.....	Fog	.....	.....	0	0	Foggy	
Santa Fé, N. M.	23.22	589.8	29.76	755.9	25	— 3.9	75	SW	1	0.4	.....	.....	10s	.....	.....	0.09	2.3	Cloudy	
Savannah, Ga.	.....	.....	30.19	766.8	50	10.0	86	NE	7	3.1	.....	.....	10s	.....	.....	0	0	Cloudy	
Shreveport, La.	.....	.....	30.28	769.1	41	5.0	82	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Smithville, N. C.	.....	.....	30.15	765.8	43	6.1	91	NW	6	2.7	.....	1cs	0	.....	.....	0	0	Clear	
Springfield, Mass.	.....	.....	29.97	761.2	34.5	1.4	69	NW	6	2.7	.....	.....	10ks	.....	NW	0	0	Cloudy	
St. Louis, Mo.	.....	.....	30.20	767.4	34	1.1	89	NE	8	3.6	.....	.....	Fog	.....	.....	0	0	Foggy	
St. Marks, Fla.	.....	.....	30.14	765.5	51	10.6	93	N	6	2.7	.....	.....	10s	.....	N	0	0	Cloudy	
St. Paul, Minn.	.....	.....	29.86	758.4	33	0.6	89	SW	8	3.6	.....	0	0	.....	.....	0	0	Clear	
St. Paul's Island, Alaska	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Thatcher's Island, Mass.	.....	.....	29.86	758.4	31	— 0.6	68	NW	16	7.2	.....	0	0	.....	.....	0	0	Clear	
Toledo, Ohio	.....	.....	30.14	765.5	36	2.2	80	SW	12	5.4	.....	.....	10s	.....	SW	0.01	0.3	Cloudy	
Tucson, Arizona	27.06	702.6	30.21	767.3	24	— 4.4	.....	S	.....	.....	.....	0	0	.....	.....	0	0	Clear	
Tybee Island, Ga.	.....	.....	30.18	766.6	48	8.9	92	NE	12	5.4	.....	.....	10s	.....	NE	0	0	Cloudy	
Vicksburg, Miss.	.....	.....	30.27	768.8	41	5.0	83	Calm	0	0	.....	8cs	0	.....	.....	0	0	Fair	
Virginia City, M. T.	24.35	618.5	29.83	757.7	22	— 5.6	66	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Washington, D. C.	.....	.....	30.13	765.3	38	3.3	71	N	12	5.4	.....	0	2s	.....	W	Inap.	Inap.	Fair	
Wilmington, N. C.	.....	.....	30.16	766.1	42	5.6	91	NW	4	1.8	.....	1c	0	.....	.....	0	0	Clear	

UNITED STATES SERIES.—CONTINUED.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Upper. 0—10.	Clouds. Amount. Low'r. 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Wood's Holl, Mass.	.....	.....	29.89	759.2	32	0.0	79	N	12	5.4	.....	0	Haze	.....	.....	0	0	Hazy.....	
Yankton, Dakota	28.78	731 0	30.12	765.0	32	0.0	74	W	10	4.5	.....	0	0	.....	.....	0	0	Clear	
Yuma, Arizona	.....	.....	30.16	766.1	44	6.7	.....	N	.....	.....	.....	0	0	.....	.....	0	0	Clear	
Sub-Series.																			
Kingston, Jamaica, W. I.	.....	.....	30.19	766.8	73	22.8	81	N	5	2.2	.....	5c	5s	E	.....	0	0	.....	James Gall.
Navassa, W. I.	.....	.....	.....	.....	76	24.4	.....	NE	.....	.....	1	.....	.....	.....	.....	0.05	1.3	.....	Dr. G. H. Davison.
Clifton, Ja., W. I.	27.20	690.9	29.92	760.0	61	16.1	94	NE	1.0	0.4	.....	.....	10k	.....	.....	0	0	Dull.....	C. Partridge.
Paramaribo, D. Guiana, S.A	.....	.....	30.01	762.2	81	27.2	87	E	.....	.....	2	3c	5k	E	.....	0	0	Fair.....	C. J. Hering.
Batavia, Dutch Guiana, S.A	30.03	762.8	.....	.....	78.8	26	.....	E	.....	.....	.....	.....	.....	.....	.....	0.023	0.59	½ cloudy....	Dr. H. Groot.
Medellin, Colombia, S. A.	25.20	640.1	.....	.....	66.0	18.9	77	Calm	.....	.....	0	2cs	1ks	.....	.....	0	0	Fair.....	Thomas Herran.
York Factory, B. A.	.....	.....	29.93	760.2	— 4.0	—20.0	100	S	1	0.4	.....	0	0	.....	.....	0	0	Clear	J. Fortescue, W. Wood.
Honolulu, Oahu, H. I.	.....	.....	30.13	765.3	68	20.0	95	NE	.....	.....	6	.....	.....	.....	.....	0.07	1.8	Squally.....	Daniel Smith.
Makawao, Maui, H. I.	.....	.....	30.00	762.0	61	16.1	88	Calm	.....	.....	0	0	1k	.....	.....	Inap.	Inap.	.....	F. L. Clarke.

NOTE.—The originals give the amount of cloudiness by the scale 0 to 4, except York Factory, Makawao, Medellin and Paramaribo. The elevation of the barometer at Bismarck is 1,677 feet, or 511.1 meters; Cheyenne, 6,057.3 ft., or 1,846.2 m.; Clifton, about 2,892 ft., or 881.5 m.; Denver, 5,135 ft., or 1,565.2 m.; Dodge City, 2486ft., or 757.8 m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Florence, 1,550 (?) ft. or 472.5 (?) m.; Makawao, 2,205 ft., or 672.1 m.; Morgantown, 1,027.9 ft., or 313.3 m.; Medellin, 4,876 ft., or 1,486.2 m.; Mt. Washington, 6,285 ft., or 1,915.6 m.; North Platte, 2,846 ft., or 867.4 m.; Omaha, 1,054.6 ft., or 321.4 m.; Pike's Peak, 14,150.7 ft., or 4,313.1 m.; Salt Lake City, 4,362.2 ft., or 1,329.6 m.; Santa Fe, 6,862.2 (?) ft., or 2,091.6 (?) m.; Tucson, 2,545 (?) ft., or 775.7 (?) m.; Virginia City, 5,480 (?) ft., or 1,670.3 (?) m.; Yankton, 1,278 ft., or 389.5 m. The following constants are added in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Denver, 5.22 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fe, 6.84 in.; Tucson, 2.59 in.; Virginia City, 5.48 in. The elevation of Batavia is about 6 feet; the barometric readings need the addition of 0.2 mm. or 0.01 in. for reduction to sea-level.

UNITED STATES NAVAL SERIES.

By authority of the **SECRETARY OF THE NAVY.**

Furnished by the coöperation of the Navy Department, through Commodore Daniel Ammen, U. S. N., Chief of Bureau of Navigation.

STATIONS AND VESSELS.	True course toward—	Hourly rate in knots.	*Barometer as reported.		Temperature of the Air.		Relative Humidity.	Wind.				Clouds.				Rain-fall or melted snow in the past 24 hours.		State of Ocean.	Direction of swell from—	Weather.	Observer.
								Direction.	Velocity		Force.	Amount.		Direction.							
												Up'er	Low'r	Up'er	Low'r						
			Inches.	Millimeters.	Fahrenheit.	Centigrade.	Per cent.	From—	Miles per hour.	Meters per second.	0—10.	0—10.	0—10.	From—	From—	Inches.	Millimeters.				
Naval Academy, Annapolis, Md.			29.72	754.9	38	3.3		NW			3		1		W	0	0			Clear	
Naval Hospital, Annapolis, Md.			30.12	765.0	37	2.8	81	N			2		2		N	0.02	0.5			Clear	
Navy Yard, Mare Island, Cal.			30.20	767.1	49.5	9.7	96	S			1		3			0	0			Foggy	
Navy Yard, Norfolk, Va.			30.24	768.1†	41	5.6	100	NW			2		10n							Foggy	
Navy Yard, Pensacola, Fla.			30.20	767.1	50	10.0	93	N			2		9		NE	0	0			‡D. clouds	
Navy Yard, Portsmouth, N.H.			29.80	756.9	27	— 2.8		WNW			3		0							Clear	
¶ Canonicus, New Orleans, La.			30.12	765.0	50	10.0	93	NNE			1		0							Clear	
Colorado, New York, N. Y.			30.10	764.5	35	1.7		NNW			3		1			0	0			Hazy	
Essex, Hampton Roads, Va.			30.13	765.3	44	6.7		WSW			2		10		SE					Foggy	
Hartford, Norfolk Va.			30.22	767.6	43	6.1		WSW			1					0	0			Foggy	
Michigan, Erie, Pa.			30.10	764.5	34	1.1	79	WNW			1		10							Cloudy	
Monongahela, Baltimore, Md.			30.11	764.8	40	4.4		NW			2		4n			Blank	Blank			‡D. clouds	
New Hampshire, Port Royal, S. C.			30.37	771.4	53	11.7		NE			1		10					Smooth		‡D. clouds	
Omaha, Panama.			30.02	762.5	76.5	24.7	88	NW			2		1			0	0	Smooth		Pleasant	
Ossipee, New Orleans, La.			30.21	767.3	47	8.3		NE			2		8							Hazy	
Pensacola, Panama.			30.02	762.5	77	25.0	91	NNW			1		1							‡D. clouds	
Plymouth, Pensacola, Fla.			30.17	766.3	55	12.8	74	NE			3		9		WNW			Smooth		Cloudy	
¶ Rio Bravo, Matamoras, Mex.			30.01	762.2	48	8.9	92	NE			1		0							Blue sky	
Santee, Annapolis, Md.			29.66	753.4†	41	5.0	74	NW			3		1		W					Clear	
St. Louis, League Island, Pa.			29.92	760.0	35	1.7		NW			3		6		NW	0	0			Fair	
Vandalia. Constantinople, Turkey.			30.25	768.3	37	2.8	100	NE			2		10							Snowing	
Wabash, Boston, Mass.			29.91	759.7	28	— 2.2		NW			2		2c							‡D. clouds	
Wyoming, Washington, D.C.			30.33	770.4	39	3.9		NNE			2		1		W					‡D. clouds	

* It is not known that the barometer is corrected for temperature, instrumental error or elevation. † Aneroid Barometer. ‡ Detached clouds. ¶ Barometer corrected for instrumental error and reduced to sea-level.

UNITED STATES MARINE SERIES

REPORTED TO THE OFFICE OF THE CHIEF SIGNAL OFFICER OF THE ARMY.

NAMES OF VESSELS.	True course toward—	Hourly rate in knots.	Barometer reduced to sea-level.		Temperature of the Air.		Relative Humidity.	Wind.				Clouds.				State of Ocean.	Direction of swell from—	Weather.	Observer.
								Direction.	Velocity.		Force.	Amount.		Direction.					
												Up'er	Low'r	Upper.	Lower.				
			Inches.	Millimeters.	Fahrenheit.	Centigrade.	Per cent.	From—	Miles per hour.	Meters per second.	0—10.	0—10.	0—10.	From—	From—				
PACIFIC MAIL S. S. CO. MARINE SERIES. Furnished by the coöperation of ————, President; Williams, Blanchard & Co., Agents.																			
S. S. City of Peking																			Lt. Z. L. Tanner, U.S.N
OCCIDENTAL AND ORIENTAL S. S. CO. MARINE SERIES. Furnished by the coöperation of George H. Bradbury, President; T. H. Goodman, Agent.																			
S. S. Belgic																			Capt. John Metcalf.
S. S. Gaelic																			Capt. W. H. Kidley.
S. S. Oceanic																			Capt. H. Parsell.
NORTH GERMAN LLOYD OF BREMEN MARINE SERIES. Furnished by the coöperation of A. Schumacher & Co., Agents.																			
S. S. Baltimore																			Capt. H. Andressen.
S. S. Berlin																			Capt. C. Pohle.
S. S. Braunschweig																			Capt. K. Undütsch.
S. S. Nürnberg																			Capt. A. Jaeger.
S. S. Ohio																			Capt. G. Meyer.
MARINE SERIES. (Miscellaneous.) Furnished by the coöperation of Captain James Jorgensen.																			
Schooner Addie Fuller, at Brunswick, Ga			30.12	765.0	52	11.1	86	NE	4	1.8			10s		NE			Overcast	Capt. James Jorgensen

NOTE.—The schooner Addie Fuller gives the amount of cloudiness by the scale 0 to 4.

COLLATED AT THE OFFICE OF THE CHIEF SIGNAL OFFICER OF THE ARMY, WASHINGTON, D. C.

The records which appear in this Bulletin are copied from the regular exchanges of this office, made in each instance in compliance with an especial r eques and are published for the uses of the coöperating observers. The barometric readings in the first two columns are reduced to freezing and their respective standards; those in the second two also to mean sea-level. The "weather" is generally published as given.

When the distinction between the upper and lower strata of clouds is not reported, the *kinds* or *types*, viz: cirrus, cumulus, stratus, nimbus, scud, fracto, pallio, haze, fog and smoke, as indicated, respectively, by the letters c, k, s, n, d, f, p, hz., fg. and sm'e, are generally published with the amount in the lower-cloud column. The distinction between the upper and lower strata is carefully made in the United States Series and a portion of the Canadian Series, and the types are indicated by the above letters or their combinations in the proper column

Albert J. Myer

Brig. Gen. (Bvt. Assg'd,) Chief Signal Officer, U. S. A.

BULLETIN

OF

INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON FEBRUARY 7, 1877.

7:35 A. M. WASHINGTON mean time.

6:7 A. M. MEXICO mean time.
7:7 A. M. SAN JOSE mean time.
0:6 P. M. LISBON mean time.
0:28 P. M. MADRID mean time.
0:43 P. M. GREENWICH mean time.
0:53 P. M. PARIS mean time.
1:1 P. M. BRUSSELS mean time.
1:4 P. M. UTRECHT mean time.
1:13 P. M. BERNE mean time.

10:2 P. M. TOKEI mean time.

1:26 P. M. CHRISTIANIA mean time.
1:38 P. M. COPENHAGEN mean time.
1:33 P. M. ROME mean time.
1:37 P. M. BERLIN mean time.
1:49 P. M. VIENNA mean time.
1:55 P. M. STOCKHOLM mean time.
2:18 P. M. ATHENS mean time.
2:39 P. M. CONSTANTINOPLE mean time.
2:44 P. M. ST. PETERSBURG mean time.

ALGERIAN SERIES.

Furnished by the coöperation of General d'Eudeville, Commandant Supérieur du Génie in Algeria.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Nemours			30.48	774.2	64.6	18.1		ESE			3		2			0	0	Clear	Michel.
Algiers			30.45	773.5	58.5	14.7		W			1		3			Inap.	Inap.	Fair	Biscarrat.
La Calle			30.39	771.8	55.6	13.1		N			3		4			0.079	2.0	Fair	Fleury.
Tunis			30.39	771.8	55.4	13.0		N			3		2			0.079	2 0	Clear	Jacques.
Sfax																			
Saida			30.41	772 3	48.2	9.0		SSE			2		6			0	0	Fair	Millot.
Tebessa			30.34	770.6	44.6	7.0		N			3		2			0	0	Clear	Bourgeois.
Gerfville			30.26	768.7	44.8	7.1		N			3		5			0	0	Fair	Lemaillot.
Laghouat			30.31	769.9	55.8	13.2		N			2		4			0	0	Fair	Guyot.
Biskra			30.45	773.5	68.0	20.0		NW			2		5			0	0	Fair	Kuntz.

NOTE.—In the originals the distinction between the amount of upper and lower clouds is apparently not made. The weather is published as given. The rain-fall is measured at 7 a. m., local time.

AUSTRIAN SERIES.

Furnished by the cooperation of Professor Ferdinand Osnaghi, Director of the Imperial and Royal Central Meteorological Institute at Vienna.

Agram			30.11	764.8	40.5	4.7	63	SW			2		9			0	0		Prof. Ivan Stozir.
Cracow, I. R. Observatory			29.72	754.8	37.4	3.0	93	W			2		10			0.571	14.5		Dr. Wierzbiski.
Eperies			29.85	758.3	33.1	0.6	82	S			1		10			0	0		Julius Mikolik.
Gratz	28.76	730.6	30.04	763.1	43.3	6.3	58	SSW			2		5			0	0		Andreas Rospini.
Hermannstadt	28.52	724.5	30.01	762.2	34.5	1.4	74	WNW			3		6			0.010	0.25		Prof. Reissenberger
Kremsmünster	28.74	730.0	30.12	765.0	42.4	5.8	76	W			7		10			0.799	20.3		Prof. C. Wagner.
Lemberg			29.69	754.1	33.6	0.9	92	SW			2		10			0.335	8.5		Dr. T. Stanecki.
Nyiregyhaza																			Habzsuda Daniel.
Pola			30.21	767.4	47.7	8.7	68	SSW			1		10cs			0	0		I.R.Hydrographic Office.
Szegedin			30.05	763.3	40.1	4.5	71	Calm			0		10			0.144	3.66		Karl Stancel.
Trieste			30.26	768.5	44.6	7.0	70	SW			1		9			0	0		Prof. V. Farolfi.
Vienna			29.91	759.8	43.5	6.4	76	W			8		10			0.189	4.8	Raining	I. R. Central Met. Obs'y.

NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 7 p. m., local time. The elevation of Gratz is 343.5 meters, or 1,126.9 feet; Hermannstadt, 407.8 meters, or 1,337.9 feet; Kremsmünster, 383.6 meters, or 1,258.5 feet.

BELGIAN SERIES.

Furnished by the cooperation of J. C. Houzeau, Director of the Royal Observatory at Brussels.

Arlon			30.26	768.7	45.1	7.3	100	SW			2		10			0.252	6.4		Royal Observatory.
Brussels			30.14	765.5	52.0	11.1	89	W			2		10n		WSW	0.246	6.25	Light rain	
Furnes			30.14	765.5	51.6	10.9	90	WSW			6		6			0.146	3.7		
Maeseyck			30.11	764.9	50.9	10.5	95	WSW			8		10			0.331	8.4	Raining	

NOTE.—In the originals, the weather is occasionally given in general notes.

BRITISH SERIES

Furnished by the coöperation of Robert H. Scott, Esq., Director of the Meteorological Office, London, Alexander Buchan, Secretary of the Scottish Meteorological Society, Edinburgh, and the respective Observers.

STATIONS.	Barometer. Corrected for instrumental error and temperature. Inches.	Barometer. Corrected for instrumental error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Upper. 0—10.	Clouds. Amount. Lower. 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Aberdeen			29.83	757.7	46.7	8.2		SW	15	6.7			3			0	0	Blue sky	William Boswell.
Ardrossan			29.98	761.5	49	9.4		W			3		6					*D. clouds	William McNeil.
Armagh, Observatory			30.08	764.0	49.0	9.4		W	10	4.5			7					*D. clouds	S. Call, for Dr. Robinson.
Bidston (Liverpool Obs.)			30.06	763.5	48.1	8.9		WSW	21	9.4			10					Raining	John Hartnup.
Birr Castle, (Parsonstown)			30.14	765.5	49.6	9.8		WSW			1		10					Overcast	J. Dreyer.
Bradford			30.01	762.2	50.6	10.3		W			2		10			0.09	2.3	Overcast	J. McLandsborough.
Bridgetown, (Barbados)			30.04	763.0	79.5	26.4		NE			3		5					*D. clouds	Sergt. J. F. Halanen, A.
Cambridge, Observatory			30.08	764.0	54.0	12.2		W			3		10					Overcast	H. Todd. [H.C.
Cardington			30.12	765.0	54.0	12.2		W			2		9					Overcast	John McLaren.
Carlisle																			T. Bell, for J. Cartmell.
Chatham, School M. E.			30.21	767.3	58.2	14.6		W			4		6					Blue sky	Capt. Fellows, R. E.
Dartmoor	28.75	730.2	30.28	769.1	47.6	8.7		W			4		10					Foggy	R. E. Power.
Davos Platz, (Switzerland)	25.03	637.8			36.2	2.3	68	Calm			0		9			0.201	5.11	Overcast	Francis Redford, M. A.
Donaghadee			30.03	762.7	44	6.7		NW			3		3					*D. clouds	J. Mac Gowan.
Dover			30.14	765.5	52	11.1		WSW			3		7					¾ clouded	J. Costello.
Eccles, near Manchester)			30.05	763.3	49.7	9.8		WSW	4.8	2.1			10					Raining	Thomas Mackereth.
Falmouth, Observatory			30.30	769.6	54.0	12.2		WSW			5		9					Overcast	The Staff.
Fort Napier, (Natal)	27.60	701.0	29.84	757.9	81.4	27.4		E			1		1					Blue sky	P'vt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.95	760.7	85	29.4		N			1		2					*D. clouds	
Galway, Queen's College			30.09	764.3	50	10.0		W			1		10					Gloomy	Prof. A. H. Curtis.
Gibraltar, (Mediterranean)			30.45	773.4	60.2	15.7		E			5		1					*D. clouds	Corpl. C. Aitken, A.H.C.
Glasgow, Observatory			29.93	760.2	47.4	8.6		W			2		4					*D. clouds	Lewis Stuart.
Great Yarmouth			30.01	762.2	53	11.7		WNW			4		7					Misty	G. T. Watson.
Greenwich, Royal Obs'y			30.14	765.5	57.8	14.3		WSW			4		10					Overcast	The Staff, for G. B. Airy.
Guernsey			30.32	770.1	53.5	11.9		SW			3		8					*D. clouds	Dr. S. E. Hoskins.
Helston			30.32	770.1	53	11.7		W			2		5k			0.15	3.8	Fair	M. P. Moyle.
Holyhead			30.09	764.3	50	10.0		WSW			2		10					Misty	John Tilston.
Kew, Observatory			30.15	765.8	57.5	14.2		W	20	8.9			9d		SW			Threatening	The Staff.
Kingstown			30.11	764.8	51	10.6		W			4		10					Overcast	George Mitchell.
Leicester Museum			30.06	763.5	50.0	10.0		N			2		10					Drizzling	Wm. J. Harrison, F.G.S.
Malta, (Mediterranean)			30.28	769.1	56.2	13.4		NW			4		6k					*D. clouds	Corp'l. P. Bravis, A.H.C.
Nairn			29.80	756.9	46	7.8		WSW			2		0					Clear	W. D. Penny.
Nassau, (Bahamas)			30.00	762.0	73.8	23.2		SE			2		3					*D. clouds	Surg. Maj. Henry.
Nottingham, Observatory			30.08	764.0	50.9	10.5		WNW			2		10d		WNW	0.043	1.09	Raining	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			30.06	763.5	51.9	11.1		W			3–4		10					Raining	Rev. Stephen Whitty.
Oxford, Radcliff Obs'y			30.11	764.8	54	12.2		W			4		10					Gloomy	J. Lucas.
Plymouth			30.28	769.1	53.5	11.9		W			2		10					Overcast	John Merrifield.
Roche's Point			30.18	766.6	52	11.1		WNW			4		10					Wet	W. Kennedy.
Saint Ann's Head			30.15	765.8	51	10.6		WSW			6		10					Misty	John C. Walker.
Saint Helier, (Jersey)			30.34	770.6	53.4	11.9		W			3		10					Overcast	A. P. Amy.
Sandwick Manse, (Orkneys)			29.68	753.9	42.5	5.8		W	32	14.3			2					Showery	Rev. C. Clouston, LL. D.
Scarborough																			F. Shaw.
Scutari Cemetery, (Turkey			30.07	763.8	43.6	6.4		SW			1		5					*D. clouds	Sergt. W. H. Lyne.
Sheffield			30.02	762.5	53.1	11.7		W			4		9			0.030	0.76	Raining	W. F. Cooper.
Silloth Rectory			29.98	761.5	48.0	8.9	89	SW			5		6			0	0	*D. clouds	Rev. Francis Redford
Stonyhurst, Observatory			30.04	763.0	48.1	8.9		W			3		10					Misty	Rev. S. J. Perry.
Stornoway, Lews C., (Hebr.)			29.75	755.6	42	5.6		W			5		10					Showery	John Smith.
Stratfield Turgiss			30.19	766.8	56.3	13.5		W			1		8					*D. clouds	Rev. Charles H. Griffith.
Thurso			29.70	754.4	43	6.1		WSW			5		8					Showery	John Trotter.
Truro, Royal Institution			30.30	769.6	55	12.8		W			7		10					Raining	W. Newcombe.
Valencia, Observatory			30.18	766.6	48.7	9.3		NNW	6	2.7			10					Raining	The Staff.
SUB-SERIES.																			
Calf of Man, (Isle of Man)																			Henry Mercer.
Cape Good Hope, Obs'y			30.10	764.5	76.8	24.9	50	SSE	25	11.2		0	1						The Staff, for E. J. Stone.
Hobart Town, (Tasmania)			30.04	763.0	71.5	21.9	88	NE			2		4k			0	0		Francis Abbott, F.R.A.S.
Leith, Restalrig Park			29.93	760.2	48.8	9.3		W			4		3k			0.01	0.3	Fine	Andrew Gibb.
Mauritius, Observatory			29.82	757.4				ENE	2.8	1.3						1.52	38.6		C. Meldrum.
Melbourne, Observatory			29.95	760.7	66.4	19.1	73	Calm	0	0			5			0	0	Sultry	R. L. J. Ellery.
Monach Light-house, (Hebrides)																			J. Youngclause.
North Unst, (Shetland Is.)			29.36	745.7	41	5.0		W			8	4	5	NW		Obsd	Blank		Robert Burnet.

NOTE.—Generally, the originals do not give the relative humidity, rain-fall, or distinction between upper and lower clouds. The originals give the wind direction to 32 points and weather by the Beaufort notation. The originals give the barometer for Aberdeen, Cardington, Galway, Oxford, St. Helier, Sandwick, Scarborough, Stonyhurst, Leith, Monach and North Unst as read off and the amount of cloudiness for Stornoway by the scale 0 to 4. The wind-force is given by the scale 0 to 12 in the official series; 0 to 6 in the sub-series; except in lbs. per square foot for Greenwich and Hobart Town. The rain-fall is measured at Aberdeen at 10 a. m.; Bradford, 9 a. m.; Hobart Town, 7:30 a. m.; Nottingham, 6 p. m.; Mauritius, 9 a. m., local time. The elevation of Dartmoor is 1,460 feet, or 426.7 meters; Davos Platz, 5,1052 feet, or 1,556.62 meters; Fort Napier, 2,260 feet, or 670.6 meters. *Detached clouds.

By authority of the Minister of Foreign Affairs.

COSTA RICA SERIES.

Furnished by the coöperation of Senor Federico Maison, Director of the Central Office of Statistics and Meteorology.

San José																			

DANISH SERIES.

Furnished by the cooperation of Captain N. Hoffmeyer, Director of the Royal Danish Meteorological Institute at Copenhagen.

Copenhagen			29.62	752.4	38.8	3.8	93	NW			2		10						
Fanöe			29.79	756.6	41.0	5.0	95	W			4		1						
Godthaab, (Greenland)			29.59	749.4	15.1	— 9.4	78	SSE			4		8						
Stykkisholm, (Iceland)			29.12	739.6	28.2	— 2.1	96	SE			4		8						
Thorshavn, (Faröe)			29.42	747.3	37.2	2.9	64	W			6		7						
Vestervig			29.70	754.3	41.2	5.1	98	NW			6		10					Hailing	

NOTE.—The originals give the wind-force by the scale 0 to 6; occasionally, weather by Vienna symbols; no distinction between the amount of upper and lower clouds.

FRENCH SERIES.

Furnished by the co-operation of His Excellency, U. J. Le Verrier, Director of the Paris Observatory, and the respective Observers.

STATIONS.	Barometer. Corrected for instru'tal error and temperature. Inches.	Barometer. Corrected for instru'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters	Weather.	Observer.
Alençon	.....	.....	30.43	773 0	46.4	8	85	W	.....	.....	3	.....	10	.....	.....	0	0	Covered	Normal School.
Amiens	.....	.....	30.29	769.4	53.6	12.0	80	E	.....	.....	4	.....	8	.....	E	0	0	Very cloudy	Normal School.
Avignon	.....	.....	30.38	771.6	53.6	12	48	N	.....	.....	6	.....	0	.....	.....	0	0	Very clear...	Normal School.
Bar-sur-Seine	.....	.....	30.30	771.8	47.5	8.6	88	WSW	.....	.....	2	.....	10	.....	.....	0.004	0.1	Covered	C. Saillard.
Beaumette, (near Angers)	.....	.....	30.42	772.7	54.1	12.3	83	SW	8.7	3.9	.....	.....	.....	.....	SW	0	0	.....	Beaumette Observ'tory.
Beauvais	.....	.....	30.32	770.2	55.8	13.2	79	WSW	.....	.....	4	.....	10	.....	W	0	0	Covered	Normal School.
Besançon	.....	.....	30.49	774.5	44.8	7.1	84	SSW	.....	.....	3	.....	8	.....	SW	0	0	Very cloudy	Normal School.
Bourg en Bresse	.....	.....	30.57	776.5	44.6	7	83	SE	.....	.....	1	.....	10n	.....	.....	0	0	Covered	Normal School.
Bourges	.....	.....	30.52	775.2	47.3	8.5	92	SW	.....	.....	4	.....	10	.....	SW	0	0	Covered	Normal School.
Brest	.....	.....	30.36	771.1	55.2	12.9	76	WSW	.....	.....	3	.....	10	.....	W	0.030	0.75	.....	Naval Observatory.
Carcassonne	.....	.....	30.53	775.4	50.4	10.2	56	SW	.....	.....	2	.....	1	.....	NE	0	0	Clear.....	Normal School.
Caen	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Chartres	.....	.....	30.31	769.9	54.0	12.2	93	WSW	.....	.....	4	.....	8	.....	E	0	0	.....	Normal School.
Châlons-sur-Marne	.....	.....	30.34	770.5	49.6	9.8	89	W	.....	.....	4	.....	10	.....	.....	.....	.....	Light rain...	Normal School.
Clermont	.....	.....	30.52	775.2	48.0	8.9	63	NE	.....	.....	1	.....	10	.....	.....	0	0	.....	Puy de Dome Obs'y.
Commercy	.....	.....	30.35	770.9	44.8	7.1	97	WSW	.....	.....	6	.....	8kn	.....	W	0.035	0.9	Very cloudy	Normal School.
Commune de Gréasque*	.....	.....	30.38	771.6	51.4	10.8	93	W	.....	.....	2	.....	2	.....	W	0	0	.....	M. Kina.
Grenoble	.....	.....	30.54	775.6	41.7	5.4	61	NE	.....	.....	1	.....	0	.....	.....	0	0	Clear	Normal School.
La Roche-sur-Yon	.....	.....	30.54	775.8	52.9	11.6	80	SW	.....	.....	2	.....	10	.....	.....	0.039	1.0	Covered	Normal School.
Le Mans	.....	.....	30.42	772.6	52.9	11.6	90	W	.....	.....	2	.....	5	.....	W	0.024	0.6	Cloudy.....	Normal School.
Lons-Le-Saulnier	.....	.....	30.52	775.1	43.7	6.5	94	NNW	.....	.....	1	.....	5	.....	.....	.....	.....	Light rain....	Normal School.
Lorient	.....	.....	30.41	772.5	57.2	14.0	76	W	.....	.....	2	.....	5	.....	W	0.020	0.5	Cloudy.....	Naval Observatory.
Mâcon	.....	.....	30.09	779.5	36.9	2.7	97	Calm	.....	.....	0	.....	10	.....	.....	0	0	Covered	Normal School.
Metz	.....	.....	30.37	771.3	46.1	7.8	93	SW	.....	.....	6	.....	10	.....	.....	0.083	2.1	Storm.....	M. Schuster.
Mirecourt	.....	.....	30.39	772.0	43.2	6.2	94	SSW	.....	.....	2	.....	10	.....	NNE	0.16	4.	Covered	Normal School.
Nismes	.....	.....	30.41	772.4	57.9	14.4	61	W	.....	.....	2	.....	.....	.....	.....	0	0	.....	Normal School.
Orleans	.....	.....	30.37	771.5	50.7	10.4	95	W	.....	.....	2	.....	10	.....	W	0	0	Covered	Normal School.
Paris, Observatory	.....	.....	30.35	770.9	53.8	12.1	86	WSW	.....	.....	3	.....	10k	.....	W	0.002	0.06	Rainy.....	National Observatory.
Parthenay	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Privas	.....	.....	30.31	769.9	43.2	6.2	82	NNE	.....	.....	2	.....	2	.....	NNE	0	0	Slightly cl'dy	Normal School.
Rochefort, Observatory	.....	.....	30.52	775.1	52.7	11.5	75	SSW	.....	.....	4	.....	10	.....	N	0	0	Covered	Naval Observatory.
Rouen	.....	.....	30.31	769.8	56.8	13.8	76	W	.....	.....	2	.....	10	.....	W	0	0	Covered	Normal School.
Saint Lo	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Tarbes	29.44	747.8	30.56	776.2	48.6	9.2	65	N	.....	.....	1	.....	0	.....	.....	0	0	Clear.....	Normal School.
Villefranche	.....	.....	30.54	775.8	49.1	9.5	90	SE	.....	.....	1	.....	8	.....	.....	0	0	Very cloudy	Normal School.
Sub-Series.																			
Fort de France, Martinique	.....	.....	29.88	758.9	75.2	24	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	L'Abbé Marchési.
Marseilles	.....	.....	30.31	769.9	54.7	12.6	70	NW	.....	.....	3	.....	1	.....	.....	0	0	Clear.....	Marseilles Observatory.
Mont-Louis	25.18	639.5	30.49	774.5	47.5	8.6	28	NNW	7.4	3.33	.....	.....	2	.....	N	0	0	.....	—. Falguère.
Montsouris, Paris	.....	.....	30.34	770.6	53.1	11.7	89	W	.....	.....	3	.....	10	.....	W	0	0	.....	Montsouris Observatory
Perpignan	.....	.....	30.43	773.0	58.5	14.7	19	NW	13.0	5.83	.....	.....	0	.....	.....	0	0	.....	Dr. Fines.
Pic du Midi, (Summit,) H. P.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. Baylac.
Pic du Midi, (Plantade,) H. P.	22.76	578.1	.....	.....	42.8	6.0	.....	Calm	.....	.....	0	.....	1	.....	.....	0	0	Clear.....	General de Nansouty.
Saint Maur, (near Paris)	.....	.....	30.34	770.5	54.1	12.3	86	SW	.....	.....	2	.....	10	.....	.....	0	0	Covered	E. Renou.
Toulouse	.....	.....	30.58	776.6	45.0	7.2	69	NNW	.....	.....	1	.....	0	.....	.....	0	0	.....	Toulouse Observatory.
Tours	.....	.....	30.43	772.9	53.6	12.0	80	WSW	.....	.....	1	.....	8	.....	W	0	0	.....	C. Marquet.
Versailles, (near Paris)	.....	.....	30.34	770.7	52.9	11.6	95	W	.....	.....	1	.....	10	.....	.....	0.019	0.48	Covered	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai)	.....	.....	30.28	769.0	32.4	0.2	89	NW	5.6	2.50	.....	.....	10	.....	.....	0	0	.....	Marc Dechevrens, S. J.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—Generally, the originals give the wind-force by the scale 0 to 7; no distinction between upper and lower clouds, and, in the official series, the amount by the scale 0 to 4 the rain-fall as measured at 7, 8 or 9 a. m., local time; at Clermont, 9 a. m. of the following day; the weather in general terms as published. The elevation of Clermont is 388 meters, or 1,272.9 feet; Commune de Gréasque, 322 meters, or 1,056.4 feet; Tarbes, 308 meters, or 1,010 feet; Mont-Louis, 1,586.40 meters, or 5,204.8 feet; Pic du Midi, (Summit,) 2,877 meters, or 9,439.1 feet; Pic du Midi, Plantade,) 2,366 meters, or 7,762.6 feet. In correcting the Mont-Louis barometric observations for altitude, the constant 135. millimeters has been added. *Bouches-du-Rhône

GERMAN SERIES.

Furnished by the coöperation of Professor Dr. G. Neumayer, Director of the German Naval Observatory, Hamburg.

Bamberg	.....	.....	30.11	764.9	43.7	6.5	94	W	.....	.....	6	.....	10	W	.....	0.098	2.5	.....	Prof. T. Hoh.
Berlin	.....	.....	29.80	756.9	48.6	9.2	90	NW	.....	.....	2	.....	10	.....	.....	0.177	4.5	Raining.....	Prof. Arndt.
Breslau	.....	.....	29.72	754.8	43.9	6.6	96	W	.....	.....	7	.....	10	NW	.....	0.291	7.4	Raining.....	Royal University Obs'y.
Carlsruhe	.....	.....	30.26	768.6	44.2	6.8	88	SW	.....	.....	7	.....	10	.....	.....	0.228	5.8	.....	A. Senz.
Cassel	.....	.....	30.03	762.7	49.6	9.8	92	WNW	.....	.....	3	.....	4	WNW	.....	0.220	5.6	.....	Dr. H. Möhl.
Crefeld	.....	.....	30.05	763.2	51.1	10.6	95	W	.....	.....	4	.....	10	.....	.....	0.08	2.	Raining.....	Director Lose.
Emden	.....	.....	29.97	761.3	46.2	7.9	100	W	.....	.....	6	.....	10	.....	.....	0.185	4.7	.....	Prof. Prestel.
Frankfort on the Main	.....	.....	30.20	767.0	48.9	9.4	84	SSW	.....	.....	3	.....	10	.....	.....	0.024	0.6	.....	Physical Society.
Friedrichshafen	28.92	734.5	30.40	772.2	43.3	6.3	93	SW	.....	.....	5	.....	10	.....	.....	0.646	16.4	Raining.....	M. Wilhelm.
Hamburg	.....	.....	29.85	758.1	45.9	7.7	99	NW	.....	.....	3	.....	10	.....	.....	0.364	9.0	Covered	Captain F. Hegemann.
Kiel	.....	.....	29.79	756.6	46.1	7.8	86	NW	.....	.....	4	.....	10	.....	.....	0.220	5.6	.....	Prof. G. Karsten.
Königsberg, (Prussia)	.....	.....	29.58	751.4	33.6	0.9	84	SE	.....	.....	2	.....	10	.....	.....	0.028	0.7	Snowing.....	Prof. E. Luther.
Koslin	.....	.....	29.60	751.8	37.9	3.3	.....	W	.....	.....	4	.....	10	.....	.....	0	0	Foggy	H. Müller.
Leipsic	.....	.....	29.90	759.5	48.0	8.9	87	SW	.....	.....	4	.....	10	W	.....	0.016	0.4	.....	Prof. Bruhns.
Memel	.....	.....	29.60	751.9	30.6	— 0.8	96	SE	.....	.....	1	.....	10	.....	.....	0.008	0.2	Foggy	Reinbrecht & Skalweit.
Münster	.....	.....	29.96	761.0	51.1	10.6	97	SW	.....	.....	5	.....	10	.....	.....	0.020	0.5	.....	Prof. E. Heis.
Neufahrwasser	.....	.....	29.50	749.4	36.5	2.5	94	NW	.....	.....	1	.....	10	.....	.....	0.228	5.8	Rain & fog...	A Lothe.
Posen	.....	.....	29.63	752.5	44.4	6.9	100	W	.....	.....	6	.....	10	.....	.....	0.035	0.9	.....	Dr. Magener.
Strassburg, (in Alsace)	.....	.....	30.35	770.9	47.3	8.5	81	SW	.....	.....	3	.....	10	SW	.....	0.161	4 1	.....	Dr. Schur.
Stuttgart	.....	.....	30.24	768.1	46.4	8.0	76	W	.....	.....	4	.....	10	.....	.....	0.303	7.7	Raining.....	Prof. Schoder.
Thorn	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Dr. Hasenbalg.
Treves, (Trier)	.....	.....	30.16	766.1	47.5	8.6	93	W	.....	.....	5	.....	10	.....	.....	0.055	1.4	Foggy.....	Prof. Flesch.
Weissenburg, (Bavaria)	28.63	727.3	30.18	766.6	42.3	5.7	89	SW	.....	.....	7	.....	10	.....	.....	0.043	1.1	.....	Dr. von Bebber.
Wustrow, Naval School	.....	.....	29.79	756.7	37.6	3.1	100	W	.....	.....	4	.....	10	.....	.....	0.181	4.6	Foggy	E. F. Schütz.
German Naval Series.																			
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—The elevation of Friedrichshafen is 413.4 meters, or 1,356.3 feet; Weissenburg, 431 meters, or 1,414.0 ft. In the originals the distinction between the amount of upper and lower clouds is not made. It is not always certain that the remarks in the weather column refer to the moment of observation.

GREEK SERIES.

Furnished by the cooperation of Professor Dr. J. F. Julius Schmidt, Director of the Royal Observatory at Athens.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Athens			30.17	766.3	46 8	8 2		NW										½ clear	

Note.—The originals give the barometer corrected, but not reduced to sea-level; occasionally the kind of clouds; the weather as published. They omit the humidity, wind-force, amount of cloudiness and rain-fall.

ITALIAN SERIES.

Furnished by the cooperation of His Excellency the Minister of Agriculture, Industry and Commerce, and the respective Observers.

Udine			30.21	767.3	42.1	5.6	60	SW	1.7	0.6			4			0	0		Prof. Giovanni Clodig
Stelvio	22.27	565.7			26.6	— 3.0		W			1		7	SE		0.118	3.0		Signora Ernesta Manfredi.
Valdobbia	22.33	567.1			28.0	— 2.2	76	WNW			4		6	NNE		0	0		Ab. Dom. Mongini.
Padua			30.21	767.4	40.3	4.6	77	NNE	1.5	0.6			9	NNE		0	0		Prof. Dott. Lorenzoni.
Vicenza			30.20	767.1	40.6	4.8	71	E	0	0			6	W		0	0		Conte Alm. Da Schio.
Verona			30.19	766.9	45.0	7.2	71	E			1		0			0	0		Dott. B. Bertoncelli.
Bergamo	28.82	732.0	30.18	766.6	48.2	9.0	43	SSW			4		4			0	0		Prof Trionfini Carlo.
Domodossola			30.17	766.4	50.0	10.0	52	Calm			0		5			0	0		Prof. Giuseppe Calza.
Milan			30.23	767.8	54.5	12.5	59	NW			1		4	NW		0	0		A . Gio. Capelli
Pavia			30.21	767.4	47.7	8.7	62	W			4		2	SW		0	0		Pr . Gio. Cantoni.
Moncalieri			30.26	768.6	45.0	7.2	55	SSE	3.8	1.7			3	NE		0	0		Prof. P. F. Denza.
Mondovi	28.28	718.4	30.26	768.5	52.7	11.5	37	ESE			2		1	N		0	0		Prof. D. C. Bruno.
Porto Maurizio			30.34	770.6	53.1	11.7	59	SW			4		0			0	0		Prof. L. Vassallo.
Genoa			30.33	770.3	53.4	11.9	56	S	2.5	1.1			4	S		0	0		Prof. G. M. Garibaldi.
Piacenza			30.23	767.9	40.3	4.6	68	W	3.3	1.4			7	NW		0	0		Dott. G. Manzi.
Parma			30.21	767.2	47.1	8.4	65	NW			2		3			0	0		Prof. P. Pigorini.
Florence			30.32	770.1	50.0	10.0	63	N			2		7	W		0	0		Cav. F. Moucci.
Leghorn			30.33	770.4	51.8	11.0	83	W	2.5	1.1			3			0	0		Prof. P. Monte.
Siena	29.06	738.2	30.31	769.9	51.3	10.7	58	WSW	0.7	0.3			4	W		0	0		Prof. L. Toscani.
Urbino	28.09	728.6	30.31	769.8	45.1	7.3	50	SW			2		1			0	0		Prof. P. Serpieri.
Pesaro			30.25	768.3	44.1	6.7	94	NW	19.	8.6			1	N		0	0		Prof. Luigi Guidi.
Ancona			30.22	767.5	50.7	10.4	46	SE			2		1			0	0		Prof. F. De— Bosis.
Grosseto			30.35	770.8	53.1	11.7	63	SW			2		5	NW		0	0		Avv. P. Ponticelli.
Rome			30.34	770.6	53.2	11.8	49	SW	2.5	1.1			0			0	0		Prof's. P. Secchi & L. Respighi.
Naples, O. U			30.30	769.6	54.5	12.5	34	NNW			2		0			0	0		Prof. L. Palmieri.
Lecce			30.21	767.4	49.1	9.5	54	NE	12.7	5.6			4			0	0		Prof. C. De—Giorgi.
Cosenza			30.32	770.1	49.1	9.5	68	NW	9.4	4.2			0			0	0		Prof. F. D. Conti.
Cagliari			30.35	770.8	55.0	12.8	36	NW			2		0			0	0		Prof. A. Pacinotti.
Riposto, (Sicily)			30.25	768.3	55.4	13.0	41	N			4		1	S		0	0		Prof. F. Caffero.
Palermo			30.28	769.2	51.4	10.8	52	NNE	6.5	3.1			7			0.008	0.2	Light rain.	Prof. G. Cacciatore.
Caltanissetta	28.26	717.9	30.28	769.1	44.2	6.8	74	NW			4		3	E		0	0		Prof. A. Pagani.
Siracusa			30.35	770.8	53.6	12.0	54	E			2		6	NNE		0.118	3.0	Raining	Prof. V. Giuliano.
Sub-Series.																			
Naples, S. R.			30.37	771.3	50.0	10.0	48	NE	0	0			0			0	0		Prof. F. Brioschi.

Note.—The originals give the wind-force by the scale 0 to 4, or the velocity in kilometers per hour; generally, no distinction between upper and lower clouds, occasionally the weather by the Vienna symbols. The elevation of Stelvio is 2,543.0 meters, or 8,342.9 feet; Valdobbia, 2,548.0 meters or 8,359.3 feet; Bergamo, 379.6 meters, or 1,245.3 feet; Modovi, 556 meters, or 1,824.2 feet; Siena, 348.5 meters, or 1,143.3 feet; Urbino, 451 meters, or 1,479.7 feet. Caltanissetta, 570.3 meters, or 1,871.0 feet.

JAPANESE SERIES.

Furnished by the coöperation of the Imperial University of Tokei, Japan.

Tokei			29.83	757.7	47	8.3		NW	8	3.6			10			1.14	28.2		Prof. P. V. Veeder.

Note.—The originals give the amount of cloudiness by the scale 0 to 4 without distinguishing between upper and lower clouds. The rain-fall is measured at 7 a. m., cal time.

MEXICAN SERIES.

By authority of the Secretary of Public Works.

Furnished by the coöperation of Senor Mariano Barcena, Director of the Central Meteorological Observatory in the City of Mexico.

Mexico																		Mariano Barcena. Vicente Reyes. Miguel Perez. (Engineers in charge.)	

Note.—The elevation of Mexico is 2,290 meters, or 7,512.9 feet. The rain-fall is measured at 6 a. m., local time.

NETHERLANDS' SERIES.

Furnished by the cooperation of Professor Buys Ballot, Director of the Royal Meteorological Institute of the Netherlands at Utrecht.

Flushing			30.14	765.6	48.6	9.2		W			4					0.012	0.3		
Groningen			29.87	758.6	48.2	9.0										0.181	4.6		
Helder			29.96	761.0	48.2	9.0		WSW			4					0.126	3.2		
Utrecht			30.00	761.9	50.2	10.1	90	WSW			5		10			0.445	11.3	Overcast	

Note.—The originals give the wind-pressure in kilograms per square meter; for Utrecht, they give the weather as published, from which the amount of cloudiness is taken by the scale 0 to 4, without distinguishing between upper and lower clouds. It is assumed that the barometer readings have been reduced to sea-level.

NORWEGIAN SERIES.

Furnished by the coöperation of Professor H. Mohn, Director of the Royal Norwegian Meteorological Institute at Christiania.

Bergen			29.57	751.0	43.2	6.2	85	WSW	11.9	5.3			10			0.024	0.6		
Brönö			29.21	741.8	35.8	2.1	73	S	17.9	8			10					Rain & snow	
Christiania			29.55	750.5	31.1	— 0.5	83	Calm	0	0			10			0.126	3.2		
Tromsö			29.19	741.3	26.2	— 3.2	70	N	4.5	2			5			0	0		

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols. The cloudiness and weather at Bergen refer to 2h., p. m., local time, instead of 1h., 4 min.

PORTUGUESE SERIES.

Furnished by the coöperation of J. C. de Brito Capello, Director of the Meteorological Observatory of the Infante Don Luiz at Lisbon.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Angra, (Azores)	.....	.....	30.34	770.6	61.7	16.5	87	SSE	4.9	2.2	.....	.....	5	.....	.....	0	0	.....	Dr. J. A. Sampaio.
Campo Major	.....	.....	30.47	774.0	61.7	16.5	47	SE	1.3	0.6	.....	.....	0	.....	.....	0	0	.....	Dr. A. M. R. dos Santos.
Funchal, (Madeira)	.....	.....	30.35	770.8	64.6	18.1	61	ESE	11.9	5.3	.....	.....	0	.....	.....	0	0	.....	Capt. D. A. de Cunha.
Lisbon	.....	.....	30.54	775.6	55.2	12.9	65	NNE	7.4	3.3	.....	.....	0	.....	.....	0	0	.....	The Observatory.
Ponta Delgada, (Azores)	.....	.....	30.38	771.7	59.9	15.5	87	SSE	8.7	3.9	.....	.....	10	.....	.....	0	0	.....	
.....																			

Note.—The originals give the wind-velocity in kilometers per hour; occasionally, the weather by the Vienna symbols; the amount of cloudiness without distinguishing between upper and lower clouds; the barometer corrected but not reduced to sea-level. The rain-fall at Lisbon is measured at noon, instead of 0 h. 6 m., p. m.

RUSSIAN SERIES.

Furnished by the coöperation of Professor H. Wild, Director of the Imperial Central Physical Observatory of Russia, at St. Petersburg.

Warsaw	.....	.....	29.53	750.0	35.4	1.9	96	SSW	11	5	.....	.....	10	.....	.....	.....	.....	Raining	Astronomical Obs.
Wilna	.....	.....	29.64	752.8	28.6	— 1.9	73	Calm	0	0	.....	.....	8	.....	.....	.....	.....	.....	Astronomical Obs.
Dorpat	.....	.....	29.60	751.9	23.9	— 4.5	94	WSW	11	5	.....	.....	10	.....	.....	.....	.....	.....	Physical Cabinet.
St. Petersburg	.....	.....	29.61	752.0	22.5	— 5.3	98	SE	9	4	.....	.....	10	.....	.....	.....	.....	Light fog	Central Physical Obs.
Kuopio	.....	.....	29.58	751.4	21.2	— 6.0	100	E	7	3	.....	.....	10	.....	.....	.....	.....	.....	Ch. Forsten.
Kieff	.....	.....	29.67	753.5	31.8	— 0.1	61	NW	9	4	.....	.....	8	.....	.....	.....	.....	.....	Physical Cabinet.
Nikolaiev	.....	.....	29.85	758.2	36.0	2.7	69	W	22	10	.....	.....	8	.....	.....	.....	.....	.....	Kurdakof.
Kertch	.....	.....	29.92	760.3	33.8	1.0	83	Calm	0	0	.....	.....	8	.....	.....	.....	.....	.....	Lagorio.
Moscow	.....	.....	29.81	757.1	12.2	—11.0	82	SSE	9	4	.....	.....	10	.....	.....	.....	.....	.....	Meteorological Obs.
Lugan	.....	.....	29.84	757.8	18.7	— 7.4	78	SW	13	6	.....	.....	9	.....	.....	Blank	Blank	.....	Meteorological Obs.
Archangel	.....	.....	29.91	759.8	— 2.9	—19.4	89	SE	18	8	.....	.....	10	.....	.....	.....	.....	.....	Ogorodnikof.
Tiflis	28.55	725.1	30.00	762.0	40.5	4.7	54	Calm	0	0	.....	.....	7	.....	.....	.....	.....	.....	Physical Observatory.
Astrakhan	.....	.....	30.13	765.3	14.0	—10.0	94	ESE	7	3	.....	.....	10	.....	.....	Blank	Blank	.....	Sebastianof.
Kasan	.....	.....	30.11	764.9	— 5.6	—20.9	91	Calm	0	0	.....	.....	2	.....	.....	.....	.....	.....	Physical Cabinet.
Orenburg	.....	.....	30.44	773.2	2.3	—16.5	75	E	13	6	.....	.....	0	.....	.....	.....	.....	.....	Tschernischef.
Ekaterinburg	29.21	742.0	30.30	769.7	—13.9	—25.5	76	ENE	7	3	.....	.....	10	.....	.....	.....	.....	.....	Meteorological Obs.
Nukuss	.....	.....	30.20	768.6	15.4	— 9.2	63	ENE	9	4	.....	.....	0	.....	.....	.....	.....	.....	
Kasaly	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Robrof.
Tashkend	28.62	727.0	30.07	773.6	25.2	— 3.8	91	Calm	0	0	.....	.....	0	.....	.....	.....	.....	.....	Michelson.
Barnaul	.....	.....	30.73	780.6	-31.2	—35.1	80	Calm	0	0	.....	.....	0	.....	.....	.....	.....	.....	Meteorological Obs.
Yeniseisk	.....	.....	30.51	775.0	—18.8	—28.2	71	Calm	0	0	.....	.....	0	.....	.....	.....	.....	.....	Marks.
Irkutsk	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Usolzef.
Peking, (China)	.....	.....	30.30	769.5	25 3	— 3.7	82	Calm	0	0	.....	.....	9	.....	.....	.....	.....	.....	Physical Observatory.
Nertchinsk	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Meteorological Obs.
Vladivostock	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Nikolaievsk, on the Amoor	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols; they omit the rain-fall. The elevation of Tiflis is 409 meters, or 1,341.8 feet; Ekaterinburg, 306.4? m., or 1,005.2? ft.; Tashkend, 494.2? m., or 1,621.3? ft.; Irkutsk, 392 m., or 1,286 ft.; Nertchinsk, 592.0? m., or 1,942.2? ft.

SPANISH SERIES.

Furnished by the coöperation of Antonio Aguilar, Director of the Royal Observatory at Madrid, and of Don Cecilio Pujazon, Captain R. N. Director of the Naval Observatory at San Fernando.

Madrid	.....	.....	30.50	774.7	54.3	12.4	50	E	0.8	0.34	.....	0	0	.....	.....	0	0	Clear	Royal Observatory.
San Fernando	.....	.....	30.49	774.5	63.3	17.4	49	ESE	9.2	4.1	.....	0	0	.....	.....	.....	.....	.....	Naval Observatory.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

Note.—The originals give the weather in general terms, as published; rain-fall for San Fernando from preceding to following midnight; wind-velocity for Madrid in kilometers per hour.

SWEDISH SERIES.

Furnished by the coöperation of Professor R. Rubenson, Director of the Royal Swedish Meteorological Institute, at Stockholm, and of Dr. H. H. Hildebrandsson, Chief of the Meteorological Division of the Upsala Observatory.

Haparanda	.....	.....	29.56	750.8	23.0	— 5.0	100	S	.....	.....	2	.....	8	.....	.....	0.24	6.	.....	
Umea	.....	.....	29.58	751.3	13.0	—10.2	93	Calm	.....	.....	0	.....	10	.....	.....	0	0	Foggy	
Hernosand	.....	.....	29.52	749.9	15.1	— 9.4	100	NNE	.....	.....	2	.....	9	.....	.....	0	0	.....	
Stockholm	.....	.....	29.52	749.9	29.5	— 1.4	80	Calm	.....	.....	0	.....	8	.....	.....	0	0	.....	
Wisby	.....	.....	29.57	751.1	33.1	0.6	85	SSE	.....	.....	4	.....	10	.....	.....	0	0	.....	
Sub-Series.																			
Upsala	.....	.....	29.55	750.6	25.9	— 3.4	82	WSW	0	0	.....	.....	10	.....	.....	0.035	0.90	.....	Dr. Hildebrandsson.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

Note.—The originals give the wind-force by the scale 0 to 6, and Upsala also velocity in meters per second; occasionally, the weather by the Vienna symbols, or in general terms; no distinction between the amount of upper and lower clouds. The rain-fall is measured at 8 a. m., local time.

SWISS SERIES.

Furnished by the coöperation of Professor R. Wolf, Director of the Observatory at Zurich, and of Professor E. Plantamour, Director of the Observatory at Geneva.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Geneva	29.03	737.3	30.48	774.1	46.0	7.8	54	N	.....	.....	1	.....	5	.....	.....	0	0	Vapory	The Observatory.
Zurich	28.75	730.2	30.42	772.7	43.9	6.6	78	SW	.....	.....	1	.....	7	.....	.....	0	0	Cloudy	The Observatory.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—For Geneva the corresponding departures from the normal values are: Barometer, +10.6 mm; Thermometer, +5.0 cent.; Relative Humidity, —20 per cent.

NOTE.—The rain-fall is measured at Zurich at 7 a. m. on the following day. The originals give the barometer corrected but not reduced to sea-level; the wind-force by the scale 0 to 4 for Zurich; the amount of cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The elevation of Geneva is 408 meters, or 1,339 feet, and that of Zurich 470 meters, or 1,542 feet.

TURKISH SERIES.

Furnished by the coöperation of A. Coumbary, Effendi, Director of the Central Observatory at Constantinople, and of Professor C. V. A. Van Dyck, Superintendent of the Lee Observatory at Beirut.

Constantinople	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Fao, (Persian Gulf)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Salonica	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Valona	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Varna	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y	.....	.....	29.92	759.9	56.8	13.8	76	S	.....	.....	1	.....	10n	.....	SW	0.60	22.9	Overcast	Prof. C. V. A. Van Dyck.

NOTE.—The originals give the wind-force by the scale 0 to 7, (except Beirut, by the scale 0 to 12, and Constantinople velocity in meters per second;) the weather in general terms as published; no distinction between upper and lower clouds, and, except Constantinople and Beirut, the amount by the scale 0 to 4. It is assumed that the barometer is reduced to sea-level.

CANADIAN SERIES.

Furnished by the coöperation of Professor G. T. Kingston, Director of the Magnetic Observatory at Toronto, and Superintendent of the Meteorological Office of the Dominion of Canada, and the respective Observers. Those marked with a star (*) are also telegraphed daily to the office of the Chief Signal Officer, U. S. Army.

Bathurst, N. B	.....	.....	29.75	755.6	24.7	— 4.1	83	SW	12	5.4	.....	.....	10	.....	.....	.....	.....	.....	Hon. J. Ferguson.
Brockville, Ontario	.....	.....	29.82	757.4	34	1.1	.....	SW	8	3.6	.....	.....	10s	.....	SW	0	0	Cloudy	W. R. Bigg.
*Chatham, N. B	.....	.....	29.79	756.7	23	— 5.0	95	SE	2	0.9	.....	.....	10ks	.....	.....	0	0	Cloudy	G. A. Blair.
Charlottetown, P. E. Island	.....	.....	29.85	758.2	25	— 3.9	92	NE	3	1.3	.....	.....	10s	.....	.....	0	0	Cloudy	H. J. Cundall, C. E.
Cornwall, Ontario	.....	.....	29.75	755.6	33.9	1.1	91	SW	.....	.....	3	.....	10n	.....	.....	Inap.	Inap.	Threatening	James Smith, M. A.
Dalhousie, N. B	.....	.....	29.80	756.9	20.0	— 6.7	100	E	.....	.....	1	.....	.....	.....	.....	.....	.....	Snowing	H. A. Johnson.
Esquimault, B. C	.....	.....	30.34	770.6	31.0	— 0.6	79	NE	.....	.....	.....	0	0	.....	.....	0	0	Clear	W. H. Bevis.
*Father Point, Quebec	.....	.....	29.62	752.3	30	— 1.1	80	S	17	7.6	.....	.....	10n	.....	.....	0.26	6.6	Threatening	J. McWilliams.
Fredericton, N. B	.....	.....	29.88	758.9	12.1	—11.1	96	Calm	0	0	.....	.....	10s	.....	.....	0.01	0.3	Cloudy	Prof. Harrison.
*Fort Garry, Manitoba	.....	.....	30.00	762.0	8	—13.3	93	S	6	2.7	.....	0	0	.....	.....	0	0	Clear	James Stewart.
Goderich, Ontario	.....	.....	29.92	760.0	32.1	0.1	94	Calm	.....	.....	0	10k	0	.....	.....	0	0	Clearing	H. J. Strang, M. A.
Granton, Ontario	28.76	730.5	29.92	760.0	24.1	— 4.4	.....	W	.....	.....	1	.....	10n	.....	.....	0	0	Cloudy	James Grant.
*Halifax, N. S	.....	.....	29.85	758.2	25	— 3.9	94	N	8	3.6	.....	.....	10n	.....	.....	0.030	0.76	Cloudy	F. Allison, M. A.
Hamilton, Ontario	.....	.....	29.93	760.2	35.7	2.1	85	SW	.....	.....	3	.....	10n	.....	.....	0	0	Cloudy	G. Dickson.
Heart's Content, N. F	.....	.....	29.76	755.9	32	0.0	100	SE	.....	.....	3	.....	10	.....	.....	0.04	1.0	Overcast	E. Weedon.
*Kingston, Ontario	.....	.....	29.85	758.2	34	1.1	95	SW	.....	.....	1	.....	10s	.....	.....	0	0	Cloudy	S. Woods, M. A.
*Montreal, Quebec	.....	.....	29.73	755.1	34	1.1	88	SW	17	7.6	.....	.....	10n	.....	SW	Inap.	Inap.	Light snow	C. H. McLeod, C. E.
*Ottawa, Ontario	.....	.....	29.74	755.4	35	1.7	74	SW	10	4.5	.....	.....	10q	.....	W	Inap	Inap.	Threatening	J. B. Haney.
*Parry Sound, Ontario	.....	.....	29.78	756.4	34	1.1	84	W	19	8.5	.....	5k	5ks	W	W	0.01	0.3	Cloudy	Rev. R. Mosley.
Port Dover, Ontario	.....	.....	29.94	760.5	34	1.1	89	SW	13	5.8	.....	H'z	H'z	.....	.....	0	0	Cloudy	H. Morgan.
Port Hastings, N. S	.....	.....	29.91	759.7	26.4	— 3.1	.....	W	3	1.3	.....	.....	.....	.....	.....	0	0	Fine	Peter Grant.
Port Stanley, Ontario	.....	.....	29.95	760.7	33	0.6	88	W	14	6.3	.....	.....	10n	.....	SW	0	0	Cloudy	M. Payne.
*Quebec, Quebec	.....	.....	29.68	753.9	33	0.6	89	SW	4	1.8	.....	.....	10n	.....	SW	0.01	0.3	Cloudy	Capt. Ashe, R. N.
*Rockliffe, Ontario	.....	.....	29.69	754.1	34	1.1	86	NW	3	1.3	.....	.....	8s	.....	NW	Inap.	Inap.	Light snow	
St. John, N. B	.....	.....	29.87	758.7	22	— 5.6	86	NW	1	0.4	.....	0	0	.....	.....	0.01	0.3	Clear	G. Murdoch, C. E.
*Saugeen, Ontario	.....	.....	29.85	758.2	33	0.6	84	W	3	1.3	.....	.....	10ks	.....	W	0	0	Cloudy	K. Stewart.
Stayner, Ontario	.....	.....	29.83	757.7	36	2.2	74	W	8	3.6	.....	.....	10ks	.....	W	0	0	Cloudy	R. J. Cole.
Stratford, Ontario	28.58	725.9	29.90	759.4	33.0	0.6	93	W	9	4.0	.....	3cs	5s	NW	.....	0	0	Cloudy	C. J. MacGregor, M. A.
*Sydney, C. B	.....	.....	29.78	756.4	29	— 1.7	90	N	7	3.1	.....	.....	10n	.....	.....	0.41	10.4	Cloudy	T. C. Hill.
*Toronto, Ontario	.....	.....	29.88	758.9	34	1.1	87	SW	8	3.6	.....	.....	10n	.....	.....	0	0	Cloudy	Magnetic Observatory.
Woodstock, Ontario	.....	.....	29.91	759.7	32.5	0.3	100	W	12	5.4	.....	.....	10s	.....	.....	0	0	Cloudy	J. Montgomery.
Sub-Series.																			
St. Johns, Newfoundland	.....	.....	29.89	759.2	30.5	— 0.8	.....	NE	.....	.....	.....	.....	10	.....	.....	0	0	Fair	John Delany
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—The originals for Brockville, Charlottetown, Port Dover, Port Stanley, Stayner, St. Johns, N. F. and those telegraphed, give the amount of cloudiness by the scale 0 to 4. The elevation of Granton is 1,015 feet, or 309.4 m.; Stratford, 1,182 feet, or 360.3 m

UNITED STATES SERIES.

Furnished by the cooperation of Bvt. Brig. Gen. Albert J. Myer, Chief Signal Officer, U. S. Army.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain fall or melted snow in the past 24 hours. Inches.	Rain fall or melted snow in the past 24 hours. Millimeters.	Weather	Observer.
Albany, N. Y.	.....	.....	29.92	760.0	30	— 1.1	89	Calm	0	0	.....	.....	10s	.....	.....	0	0	Cloudy	
Alpena, Mich.	.....	.....	29.87	758.7	34	1.1	79	NW	6	2.7	.....	.....	10s	.....	NW	0	0	Cloudy	
Atlantic City, N. J.	.....	.....	30.01	762.2	36	2.2	90	SW	8	3.6	.....	0	0	.....	.....	0	0	Clear	
Augusta, Ga.	.....	.....	30.11	764.8	43	6.1	96	Calm	0	0	.....	.....	Fog	.....	.....	0	0	Foggy	
Baltimore, Md.	.....	.....	30.02	762.5	34	1.1	79	Calm	0	0	.....	5c	Fog	.....	.....	0	0	Foggy	
Barnegat, N. J.	.....	.....	29.99	761.7	34	1.1	95	SW	8	3.6	.....	0	2s, hz.	.....	.....	0	0	Fair	
Bismarck, Dakota	28.24	717.3	29.98	761.5	22	— 5.6	72	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Boston, Mass.	.....	.....	29.89	759.2	30	— 1.1	78	W	6	2.7	.....	0	Haze	.....	.....	0	0	Clear	
Breckenridge, Minn.	.....	.....	30.09	764.3	6	—14.4	88	SE	4	1.8	.....	0	Fog	.....	.....	0	0	Fair	
Buffalo, N. Y.	.....	.....	29.88	758.9	34.6	1.1	79	W	18	8.0	.....	.....	10s	.....	W	0	0	Cloudy	
Burlington, Vt.	.....	.....	29.80	759.9	38	3.3	71	S	6	2.7	.....	.....	10s	.....	.....	0	0	Cloudy	
Cairo, Ill.	.....	.....	30.14	765.5	34	1.1	90	Calm	0	0	.....	2cs	2s	.....	.....	0	0	Fair	
Cape Hatteras, N. C.	.....	.....	30.04	763.0	46	7.8	85	Calm	0	0	.....	10cs	0	.....	.....	0	0	Cloudy	
Cape Henry, Va.	.....	.....	30.06	763.5	44	6.7	84	SW	16	7.2	.....	5c	0	W	.....	0	0	Fair	
Cape Lookout, N. C.	.....	.....	30.09	764.3	49	9.4	86	Calm	0	0	.....	0	5s	.....	.....	0	0	Fair	
Cape May, N. J.	.....	.....	30.01	762.2	36	2.2	90	SW	10	4.5	.....	0	0	.....	.....	0	0	Clear	
Charleston, S. C.	.....	.....	30.09	764.3	50	10.0	86	N	8	3.6	.....	.....	10s	.....	NW	0	0	Cloudy	
Cheyenne, Wyoming	23.93	607.8	29.87	758.7	25	— 3.9	60	NW	16	7.2	.....	0	0	.....	.....	0	0	Clear	
Chicago, Ill.	.....	.....	30.04	763.0	34	1.1	73	W	5	2.2	.....	2c	0	W	.....	0	0	Fair	
Cincinnati, Ohio	.....	.....	30.06	763.5	34	1.1	79	S	4	1.8	.....	1c	0	W	.....	0	0	Clear	
Cleveland, Ohio	.....	.....	30.00	762.0	34.4	1.4	75	SW	12	5.4	.....	.....	10s	.....	SW	0	0	Cloudy	
Corsicana, Tex.	.....	.....	30.03	762.7	47	8.3	77	Calm	0	0	.....	2cs	8s	.....	.....	Inap.	Inap.	Cloudy	
Davenport, Iowa	.....	.....	30.13	765.3	33	0.6	89	NW	4	1.8	.....	1cs	0	.....	.....	0	0	Clear	
Denison, Tex.	.....	.....	30.06	763.5	47	8.3	85	SE	4	1.8	.....	.....	10n	.....	SE	Inap.	Inap.	Light rain	
Denver, Col.	24.72	627.9	29.94	760.5	24	— 4.4	74	S	5	2.2	.....	0	0	.....	.....	Inap.	Inap.	Clear	
Detroit, Mich.	.....	.....	29.94	760.5	32	0.0	79	W	8	3.6	.....	.....	10s	.....	.....	0	0	Cloudy	
Dodge City, Kan.	27.41	696.2	29.76	755.9	38	3.3	90	SW	1	0.4	.....	.....	10s	.....	.....	0.38	9.7	Cloudy	
Dubuque, Iowa	.....	.....	30.12	765.0	30	3.9	89	Calm	0	0	.....	0	Haz.	.....	.....	0	0	Clear	
Duluth, Minn.	.....	.....	30.08	764.0	27	— 2.8	77	NW	6	2.7	.....	0	0	.....	.....	0	0	Clear	
Eastport, Me.	.....	.....	29.85	758.2	27	— 2.8	88	NW	2	0.9	.....	.....	10s	.....	NW	0	0	Cloudy	
Erie, Pa.	.....	.....	29.93	760.2	36	2.2	80	SW	20	8.9	.....	10ck	Haz.	W	.....	0	0	Cloudy	
Escanaba, Mich.	.....	.....	30.00	762.0	30	— 1.1	78	N	14	6.3	.....	.....	10s	.....	N	0	0	Cloudy	
Fort Gibson, Indian Ter.	.....	.....	30.01	762.2	42	5.6	91	NW	1	0.4	.....	10ck	0	W	.....	0	0	Cloudy	
Ft. St. Michael, Alaska	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Fort Sill, Indian Ter.	28.80	731.5	29.93	760.2	46	7.8	77	NE	4	1.8	.....	.....	10s	.....	.....	Inap.	Inap.	Cloudy	
Fort Sully, Dakota	28.28	718.3	30.02	762.5	26	— 3.3	88	NW	2	0.9	.....	0	0	.....	.....	0	0	Clear	
Florence, Arizona	28.45	722.6	29.98	761.5	50	10.0	.....	NW	.....	.....	.....	0	0	.....	.....	0	0	Clear	
Galveston, Tex.	.....	.....	30.00	763.3	55	12.8	87	NE	8	3.6	.....	0	8s	.....	W	0	0	Cloudy	
Grand Haven, Mich.	.....	.....	29.98	761.5	35	1.7	80	NW	12	5.4	.....	0	1s	.....	.....	0	0	Clear	
Indianapolis, Ind.	.....	.....	30.08	764.0	33	0.6	89	Calm	0	0	.....	0	Sm'k	.....	.....	0	0	Clear	
Indianola, Tex.	.....	.....	30.03	762.7	54	12.2	86	NE	9	4.0	.....	0	0s	.....	.....	0	0	Fair	
Jacksonville, Fla.	.....	.....	29.90	761.7	57	13.9	93	N	7	3.1	.....	.....	10n	.....	SE	0.02	0.5	Light rain	
Keokuk, Iowa	.....	.....	30.00	763.3	33	0.6	89	Calm	0	0	.....	5c	0	.....	.....	0	0	Fair	
Key West, Fla.	.....	.....	30.04	763.0	67	19.4	100	SW	8	3.6	.....	.....	1cn	.....	.....	0.60	15.2	Heavy rain	
Kittyhawk, N. C.	.....	.....	30.09	764.3	43	6.1	91	SW	6	2.7	.....	.....	10s	.....	.....	0	0	Cloudy	
Knoxville, Tenn.	.....	.....	30.15	765.8	32	0.0	89	NW	3	1.3	.....	1c	Fog	W	.....	0	0	Fair	
La Crosse, Wis.	.....	.....	30.13	765.3	31	— 0.6	79	W	3	1.3	.....	0	0	.....	.....	0	0	Clear	
Leavenworth, Kan.	.....	.....	30.04	763.0	41	5.0	91	W	8	3.6	.....	.....	10s	.....	W	0.03	0.8	Cloudy	
Louisville, Ky.	.....	.....	30.14	765.5	31	— 0.6	88	S	4	1.8	.....	0	Fog	.....	.....	0	0	Clear	
Lynchburg, Va.	.....	.....	30.00	763.3	35	1.7	85	W	2	0.9	.....	5c	0	W	.....	0	0	Fair	
Malone, N. Y.	.....	.....	29.70	754.4	36	2.2	80	SW	14	6.3	.....	.....	10s	.....	SW	0	0	Cloudy	
Marquette, Mich.	.....	.....	30.02	762.5	28	— 2.2	77	NW	14	6.3	.....	.....	10s	.....	.....	0	0	Cloudy	
Memphis, Tenn.	.....	.....	30.12	765.0	40	4.4	91	NE	1	0.4	.....	8cs	Sm'k	SW	.....	0	0	Cloudy	
Milwaukee, Wis.	.....	.....	30.00	763.3	31	— 0.6	79	NW	10	4.5	.....	0	0	.....	.....	0	0	Clear	
Mobile Ala.	.....	.....	30.01	762.2	48	8.9	86	N	9	4.0	.....	Haz.	5s	.....	.....	0	0	Fair	
Montgomery, Ala.	.....	.....	30.00	763.5	47	8.3	76	N	4	1.8	.....	10cs	Haz	.....	.....	0	0	Cloudy	
Morgantown, W. Va.	29.00	736.6	30.09	764.3	35	1.7	80	SW	9	4.0	.....	.....	10s	.....	SW	0	0	Cloudy	
Mt. Washington, N. H.	23.30	591.8	29.66	753.4	11	—11.7	100	NW	60	26.8	.....	.....	Fog	.....	.....	0	0	Foggy	
Nashville, Tenn.	.....	.....	30.15	765.3	33	0.6	100	Calm	0	0	.....	.....	Fog	.....	.....	0	0	Foggy	
New Haven, Conn.	.....	.....	29.96	761.0	34	1.1	79	W	8	3.6	.....	Haze	Fog	.....	.....	0	0	Fair	
New London, Conn.	.....	.....	29.94	760.5	32	0.0	79	W	9	4.0	.....	0	Haz.	.....	.....	0	0	Clear	
New Orleans, La.	.....	.....	30.09	762.0	51	10.6	72	NE	3	1.3	.....	0	Sm'k	.....	N	0	0	Clear	
Newport, R. I.	.....	.....	29.94	760.5	32	0.0	89	SW	12	5.4	.....	0	0	.....	.....	0	0	Clear	
New York, N. Y.	.....	.....	29.98	761.5	30	— 1.1	68	W	10	4.5	.....	0	Sm'k	.....	.....	0	0	Clear	
Norfolk, Va.	.....	.....	30.07	763.8	41	5.0	82	SW	8	3.6	.....	5c	2s	.....	.....	0	0	Fair	
North Platte, Neb.	27.03	686.6	29.98	753.9	29	— 1.7	89	W	4	1.8	.....	.....	10ks	.....	W	0	0	Cloudy	
Omaha, Neb.	8.94	735.1	30.00	763.5	33	0.6	79	NW	2	0.9	.....	5k	5s	.....	.....	0	0	Cloudy	
Oswego, N. Y.	.....	.....	29.88	758.9	37.4	3.1	75	SW	9	4.0	.....	.....	10s	.....	W	0	0	Cloudy	
Pembina, Dakota	.....	.....	30.00	762.0	10	—12.2	90	SE	8	3.6	.....	0	0	.....	.....	0	0	Clear	
Philadelphia, Pa.	.....	.....	30.02	762.5	31	— 0.6	80	W	6	2.7	.....	0	Sm'k	.....	.....	0	0	Clear	
Pike's Peak, Col.	17.50	444.5	29.71	754.6	— 2	—18.9	84	NE	12	5.4	.....	5cs	.....	.....	.....	0.25	6.3	Fair	
Pittsburgh, Pa.	.....	.....	30.03	762.7	34	1.1	79	SW	5	2.2	.....	.....	10s	.....	SW	0	0	Cloudy	
Port Huron, Mich.	.....	.....	29.88	758.9	35	1.7	80	W	8	3.6	.....	0	5s	.....	W	0	0	Fair	
Portland, Me.	.....	.....	29.82	757.4	26	— 3.3	76	Calm	0	0	.....	0	Haze	.....	.....	0	0	Hazy	
Portland, Oregon	.....	.....	30.26	768.6	33	0.6	100	N	1	0.4	.....	.....	Fog	.....	.....	0.03	0.8	Foggy	
Punta Rassa, Fla.	.....	.....	29.91	759.7	67.4	19.7	84	SE	16	7.2	.....	.....	10n	.....	.....	0.83	21.1	Light rain	
Rochester, N. Y.	.....	.....	29.84	757.9	36	2.2	76	W	20	8.9	.....	.....	10s	.....	W	0	0	Cloudy	
Salt Lake City, Utah	25.78	654.8	30.11	764.8	19	— 7.2	84	NE	2	0.9	.....	0	0	.....	.....	0	0	Clear	
Sandy Hook, N. J.	.....	.....	29.96	760.7	32	0.0	89	W	10	4.5	.....	0	0	.....	.....	0	0	Clear	
San Diego, Cal.	.....	.....	30.00	763.3	49	9.4	87	NE	4	1.8	.....	0	0	.....	.....	0	0	Clear	
San Francisco, Cal.	.....	.....	30.07	763.8	51	10.6	86	N	2	0.9	.....	0	0	.....	.....	0	0	Clear	
Santa Fé, N. M.	23 14	587.8	29.68	753.9	24	— 4.4	74	N	9	4.0	.....	0	0	.....	.....	0.03	0.8	Clear	
Savannah, Ga.	.....	.....	30.17	766.3	51	10.6	86	NW	3	1.3	.....	.....	10s	.....	NE	0	0	Cloudy	
Shreveport, La.	.....	.....	30.10	764.5	45	7.2	92	NE	2	0.9	.....	5cs	0	N	.....	0	0	Fair	
Smithville, N. C.	.....	.....	30.10	764.5	45	7.2	86	NE	2	0.9	.....	.....	10ks	.....	.....	0	0	Cloudy	
Springfield, Mass.	.....	.....	29.93	760.2	28	— 2.2	77	S	4	1.8	.....	0	Haz.	.....	.....	0	0	Clear	
St. Louis, Mo.	.....	.....	30.10	764.5	40	4.4	64	SW	4	1.8	.....	0	Sm'k	.....	.....	0	0	Clear	
St. Marks, Fla.	.....	.....	29.97	761.2	53	11.7	97	NE	10	4.5	.....	.....	10n	.....	NE	0.30	7.6	Light rain	
St. Paul, Minn.	.....	.....	30.07	763.8	28	— 2.2	88	W	1	0.4	.....	0	0	.....	.....	0	0	Clear	
St. Paul's Island, Alaska	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Thatcher's Island, Mass.	.....	.....	29.88	758.9	30	— 1.1	68	W	16	7.2	.....	0	0	.....	.....	0	0	Clear	
Toledo, Ohio	.....	.....	29.98	761.5	39	3.9	81	SW	8	3.6	.....	.....	10s	.....	SW	0	0	Cloudy	
Tucson, Arizona	27.59	700.8	30.14	765.5	27	— 2.8	.....	SE	.....	.....	.....	0	0	.....	.....	0	0	Clear	
Tybee Island, Ga.	.....	.....	30.03	762.0	53	11.7	79	NE	12	5.4	.....	.....	10s	.....	.....	0	0	Cloudy	
Vicksburg, Miss.	.....	.....	30.10	764.5	47	8.3	67	Calm	0	0	.....	10cs	Sm'k	.....	NW	0	0	Cloudy	
Virginia City, M. T.	24.33	618.0	29.81	757.2	27	— 2.8	59	Calm	0	0	.....	1c	0	NW	.....	0	0	Clear	
Washington, D. C.	.....	.....	30.03	762.7	29.6	— 1.4	84	W	2	0.9	.....	2cs	Sm'k	SW	W	0	0	Smoky	
Wilmington, N. C.	.....	.....	30.09	764.3	46	7.8	86	NE	4	1.8	.....	10cs	Fog	.....	.....	0	0	Cloudy	

UNITED STATES SERIES.—CONTINUED.

STATIONS.	BAROMETER. Corrected for instrum'tal error and temperature. Inches.	BAROMETER. Corrected for instrum'tal error and temperature. Millimeters.	BAROMETER. Reduced to sea-level. Inches.	BAROMETER. Reduced to sea-level. Millimeters.	TEMPERATURE OF THE AIR. Fahrenheit.	TEMPERATURE OF THE AIR. Centigrade.	RELATIVE HUMIDITY. Per cent.	WIND. Direction. From—	WIND. Velocity. Miles per hour.	WIND. Velocity. Meters per second.	WIND. Force. 0—10.	CLOUDS. Amount. Up'er 0—10.	CLOUDS. Amount. Low'r 0—10.	CLOUDS. Direction. Upper. From—	CLOUDS. Direction. Lower. From—	RAIN-FALL OR MELTED SNOW IN THE PAST 24 HOURS. Inches.	RAIN-FALL OR MELTED SNOW IN THE PAST 24 HOURS. Millimeters.	WEATHER.	OBSERVER.
Wood's Holl, Mass.	.....	.....	29.94	760.5	34	1.1	79	W	12	5.4	.....	0	Haze	.....	.....	0	0	Hazy.	
Yankton, Dakota	28.76	730.5	30.13	765.3	22	— 5.6	72	NE	1	0.4	.....	0	0	.....	.....	0	0	Clear.	
Yuma, Arizona	.....	.....	30.06	763.5	46	7.8	.....	E	.....	.....	.....	0	0	.....	.....	0	0	Clear.	
SUB-SERIES.																			
Kingston, Jamaica, W. I.	.....	.....	30.16	766.1	72	22.2	76	Calm	0	0	.....	2c	0	.....	.....	0	0	.....	James Gall.
Navassa, W. I.	.....	.....	.....	.....	76	24.4	.....	E	.....	.....	1	.....	.....	.....	.....	0	0	.....	Dr. G. H. Davison.
Clifton, Ja., W. I.	27.16	789.8	29.98	761.5	60	15.6	88	E	1.0	0.4	.....	0	0	.....	.....	0.93	23.6	Fine.	C. Partridge.
Paramaribo, D. Guiana, S. A	.....	.....	30.01	762.2	78	25.6	82	SE	.....	.....	2	4c	0	E	.....	0	0	Clear	C. J. Hering.
Batavia, Dutch Guiana, S. A.	30.08	663 9	.....	.....	81.5	27.5	.....	NE	.....	.....	.....	.....	.....	.....	.....	0.030	0.75	½ cloudy	Dr. H. Groot.
Medellin, Colombia, S. A.	25.19	630.8	.....	.....	67 5	19.7	82	Calm	.....	.....	0	6cs	3ks	.....	.....	0.06	1.5	Cloudy	Thomas Herran.
York Factory, B. A.	.....	.....	30.06	763.5	—22.0	—30.0	.....	E	2	0.9	.....	0	0	.....	.....	0	0	Clear.	J. Fortescue, W. Wood
Honolulu, Oahu, H. I.	.....	.....	30.14	765.5	70	21.1	95	NE	.....	.....	6	.....	.....	.....	.....	0.05	1.3	Drizzling.	Daniel Smith.
Makawao, Maui, H. I.	.....	.....	29.97	761.2	58	14.4	87	Calm	.....	.....	0	0	1k	.....	.....	0	0	.....	F. L. Clarke.

NOTE.—The originals give the amount of cloudiness by the scale 0 to 4, except York Factory, Makawao, Medellin and Paramaribo. The elevation of the barometer at Bismarck is 1,677 feet, or 511.1 meters; Cheyenne, 6,057.3 ft., or 1,846.2 m.; Clifton, about 2,892 ft. or 881.5 m.; Denver, 5,135 ft., or 1,565.2 m.; Dodge City, 2486ft., or 757.8 m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Florence, 1,650 (?) ft. or 472.5 (?) m.; Makawao, 2,205 ft., or 672.1 m.; Morgantown, 1,027.9 ft., or 313.3 m.; Medellin, 4,876 ft., or 1,486.2 m.; Mt. Washington, 6,285 ft., or 1,915.6 m.; North Platte, 2,846 ft. or 867.4 m.; Omaha, 1,054.6 ft., or 321.4 m.; Pike's Peak, 14,150.7 ft., or 4,313.1 m.; Salt Lake City, 4,362.2 ft., or 1,329.6 m.; Santa Fé, 6,862.2 (?) ft., or 2,091.6 (?) m.; Tucson, 2,545 (?) ft., or 775.7 (?) m.; Virginia City, 5,480 (?) ft., or 1,670.3 (?) m.; Yankton, 1,278 ft., or 389.5 m. The following constants are added in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Denver, 5.22 in.; Makawao, 2.170 in.; Mt. Washington, 0.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fé, 6.54 in.; Tucson, 2.59 in.; Virginia City, 5.48 in. The elevation of Batavia is about 6 feet; the barometric readings need the addition of 0.2 mm. or 0.01 in. for reduction to sea-level.

UNITED STATES NAVAL SERIES.

By authority of the **SECRETARY OF THE NAVY.**

Furnished by the coöperation of the Navy Department, through Commodore Daniel Ammen, U. S. N., Chief of Bureau of Navigation.

STATIONS AND VESSELS.	True course toward—	Hourly rate in knots.	*Barometer as reported.		Temperature of the Air.		Relative Humidity.	Wind.				Clouds.				Rain-fall or melted snow in the past 24 hours.		State of Ocean.	Direction of swell from—	Weather.	OBSERVER.
								Direction.	Velocity		Force.	Amount.		Direction.							
												Up'er	Low'r	Up'er	Low'r						
			Inches.	Millimeters.	Fahrenheit.	Centigrade.	Per cent.	From—	Miles per hour.	Meters per second.	0—10.	0—10.	0—10.	From—	From—	Inches.	Millimeters.				
Naval Academy, Annapolis, Md.			29.65	753.1	30	— 1.1		N			0–1		1		E	0	0			Light fog.	
Naval Hospital, Annapolis, Md.			30.05	763.3	30	— 1.1	100	Calm			0		1			0	0			Clear.	
Navy Yard, Mare Island, Cal.			30.13	765.3	47.5	8.6	96	E			1		0			0	0			Pleasant.	
Navy Yard, Norfolk, Va.			30.22†	767.6†	38	3.3	90	SW			3		6cs							‡D. clouds.	
Navy Yard, Pensacola, Fla.			30.05	763.3	58	14.4	88	NNE			1		9		NE	0	0			‡D. clouds.	
Navy Yard, Portsmouth, N.H.			29.82	757.4	23	— 5.0		W			4				S&E					Hazy.	
¶ Canonicus, New Orleans, La.			29.95	760.7	47	8.3	100	NE			1		0							Clear.	
Colorado, New York, N. Y.			30.10	764.5	32	0.0		WSW			1		0			0	0			Hazy.	
Essex, Hampton Roads, Va.			30.09	764.3	45	7.2		SW			4		5		SE					‡D. clouds.	
Hartford, Norfolk Va.			30.18	766.6	40	4.4		SW			1		6		NE	0	0			Pleasant.	
Michigan, Erie, Pa.			30.00	762.0	35	1.7	80	WSW			3		10		WSW					Cloudy.	
Monongahela, Baltimore, Md.			30.01	762.2	34	1.1		Calm			0		0							Foggy	
New Hampshire, Port Royal, S. C.			30.26	768.6	53	11.7		NE			1		10					Smooth		‡D. clouds.	
Omaha, Panama.			30.02	762.5	76.1	24.7	88	NNW			0–1		3			0	0	Smooth		Pleasant.	
Ossipee, New Orleans, La.			30.16	766.1	46	7.8		NE			1									Hazy.	
Pensacola, Panama.			30.03	762.7	77	25.0	86	NNW			1		2							‡D. clouds.	
Plymouth, Pensacola, Fla.			30.02	762.5	58	14.4	76	NNE			4		9		E			Smooth		Cloudy.	
¶ Rio Bravo, Matamoras, Mex.			29.97	761.2	54	12.3	93	NE			1		4		SW					‡D. clouds.	
Santee, Annapolis, Md.			29.62†	752.3†	32	0.0		N			1–1		1		E					Light fog.	
St. Louis, League Island, Pa.			29.98	761.5	33	0.6		WSW			2		2		S	0	0			Fair	
Vandalia, Constantinople, Turkey.			30.13	765.3	46	7.8	84	WNW			1		5		SE					‡D. clouds.	
Wabash, Boston, Mass.			29.95	760.7				NNW			3		1c							‡D. clouds.	
Wyoming, Washington, D.C.			30.06	763.5	31	— 0.6		Calm			0									Hazy.	

* It is not known that the barometer is corrected for temperature, instrumental error or elevation. † Aneroid Barometer. ‡ Detached clouds. ¶ Barometer corrected for instrumental error and reduced to sea-level.

UNITED STATES MARINE SERIES

REPORTED TO THE OFFICE OF THE CHIEF SIGNAL OFFICER OF THE ARMY.

NAMES OF VESSELS.	True course toward—	Hourly rate in knots.	Barometer reduced to sea-level.		Temperature of the Air.		Relative Humidity.	Wind.				Clouds.				State of Ocean.	Direction of swell from—	Weather.	OBSERVER.
								Direction.	Velocity.		Force.	Amount.		Direction.					
												Up'er	Low'r	Upper.	Lower.				
			Inches.	Millimeters.	Fahrenheit.	Centigrade.	Per cent.	From—	Miles per hour.	Meters per second.	0—10.	0—10.	0—10.	From—	From—				
PACIFIC MAIL S. S. CO. MARINE SERIES. Furnished by the coöperation of ————, President; Williams, Blanchard & Co., Agents.																			
S. S. City of Peking																			Lt. Z. L. Tanner, U.S.N
OCCIDENTAL AND ORIENTAL S. S. CO. MARINE SERIES. Furnished by the coöperation of George H. Bradbury, President; T. H. Goodman, Agent.																			
S. S. Belgic																			Capt. John Metcalf.
S. S. Gaelic																			Capt. W. H. Kidley.
S. S. Oceanic																			Capt. H. Parsell.
NORTH GERMAN LLOYD OF BREMEN MARINE SERIES. Furnished by the coöperation of A. Schumacher & Co., Agents.																			
S. S. Baltimore																			Capt. H. Andressen.
S. S. Berlin																			Capt. C. Pohle.
S. S. Braunschweig																			Capt. K. Undütsch.
S. S. Nürnberg																			Capt. A. Jaeger.
S. S. Ohio																			Capt. G. Meyer.
MARINE SERIES. (Miscellaneous.) Furnished by the coöperation of Captain James Jorgensen.																			
Schooner Addie Fuller, at Brunswick, Ga.			29.97	761.2	55	12.8	87	NE	12	5.4			10d		NE			Threatening	Capt. James Jorgensen

NOTE.—The schooner Addie Fuller gives the amount of cloudiness by the scale 0 to 4.

COLLATED AT THE OFFICE OF THE CHIEF SIGNAL OFFICER OF THE ARMY, WASHINGTON, D. C.

The records which appear in this Bulletin are copied from the regular exchanges of this office, made in each instance in compliance with an especial reques and are published for the uses of the coöperating observers. The barometric readings in the first two columns are reduced to freezing and their respective standards; those in the second two also to mean sea-level. The "weather" is generally published as given.

When the distinction between the upper and lower strata of clouds is not reported, the *kinds* or *types*, viz: cirrus, cumulus, stratus, nimbus, scud, fracto, pallio, haze, fog and smoke, as indicated, respectively, by the letters c, k, s, n, d, f, p, hz., fg, and sm'e, are generally published with the amount in the lower-cloud column. The distinction between the upper and lower strata is carefully made in the United States Series and a portion of the Canadian Series, and the types are indicated by the above letters or their combinations in the proper column.

Albert J. Myer

Brig. Gen. (Bvt. Asst'.) Chief Signal Officer, U. S. A.

BULLETIN

OF

INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON FEBRUARY 8, 1877.

7:35 A. M. WASHINGTON mean time.

6:7 A. M. MEXICO mean time.
7:7 A. M. SAN JOSE mean time.
0:6 P. M. LISBON mean time.
0:28 P. M. MADRID mean time.
0:43 P. M. GREENWICH mean time.
0:53 P. M. PARIS mean time.
1:1 P. M. BRUSSELS mean time.
1:4 P. M. UTRECHT mean time.
1:13 P. M. BERNE mean time.

1:26 P. M. CHRISTIANIA mean time.
1:33 P. M. COPENHAGEN mean time.
1:33 P. M. ROME mean time.
1:37 P. M. BERLIN mean time.
1:49 P. M. VIENNA mean time.
1:55 P. M. STOCKHOLM mean time.
2:18 P. M. ATHENS mean time.
2:39 P. M. CONSTANTINOPLE mean time.
2:44 P. M. ST. PETERSBURG mean time.

10:2 P. M. TOKEI mean time.

ALGERIAN SERIES.

Furnished by the coöperation of General d'Endeville, Commandant Supérieur du Génie in Algeria.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Nemours	.....	.....	30.41	772.3	61 3	16.3	.....	N	.....	.....	3	.....	1	.....	.....	0	0	Clear.....	Michel.
Algiers	.....	.....	30.37	771.4	58.8	14.9	.....	SW	.....	.....	1	.....	0	.....	.....	0	0	Clear	Biscarrat.
La Calle	.....	.....	30.32	770.1	59.2	15.1	.....	NW	.....	.....	3	.....	3	.....	.....	0	0	Fair	Fleury.
Tunis	.....	.....	30.30	769.6	57.7	14.3	.....	SSE	.....	.....	3	.....	2	.....	.....	0	0	Clear	Jacques.
Sfax	.....	.....																	
Saida	.....	.....	30.37	771.3	52.0	11.1	.....	SE	.....	.....	1	.....	1	.....	.....	0	0	Clear.....	Millot.
Tebessa	.....	.....	30.32	770.0	37 8	3.2	.....	W	.....	.....	3	.....	2	.....	.....	0.079	2.0	Clear	Bourgeois.
Geriville	.....	.....	30.25	768.4	45.0	7.2	.....	SW	.....	.....	3	.....	2	.....	.....	0	0	Clear.....	Lemaillot.
Laghouat	.....	.....	30.27	768.9	51.8	11.0	.....	E	.....	.....	1	.....	1	.....	.....	0	0	Clear.....	Guyot.
Biskra	.....	.....	30.39	771.9	64.4	18.0	.....	NW	.....	.....	3	.....	0	.....	.....	0	0	Clear.....	Kuntz.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—In the originals the distinction between the amount of upper and lower clouds is apparently not made. The weather is published as given. The rain-fall is measured at 7 a. m., local time.

AUSTRIAN SERIES.

Furnished by the cooperation of Professor Ferdinand Osnaghi, Director of the Imperial and Royal Central Meteorological Institute at Vienna.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Agram	.....	.....	30.01	762.3	50.4	10.2	55	SW	.....	.....	1	.....	4	.....	.....	0	0	.....	Prof. Ivan Stozir.
Cracow, I. R. Observatory	.....	.....	29.92	759.9	37.9	3.3	83	W	.....	.....	3	.....	10	.....	.....	0.051	1.3	.....	Dr. Wierzbiski.
Eperies	.....	.....	29.83	757.7	39.2	4.0	70	NW	.....	.....	3	.....	9k	.....	SE	0.236	6.00	.....	Julius Mikolik.
Gratz	.....	.....	29.99	761.8	48.0	8.9	65	SSW	.....	.....	2	.....	5	.....	.....	0	0	.....	Andreas Rospini.
Hermannstadt	28.73	729.7	29.79	756.7	36.7	2.6	89	WNW	.....	.....	3	.....	7	.....	.....	0.031	0.80	.....	Prof. Reissenberger
Kremsmünster	28.33	719.6	30.10	764.4	41.7	5.4	94	W	.....	.....	3	.....	10	.....	.....	0.291	7.4	.....	Prof. C. Wagner.
Lemberg	28.72	720.4	29.71	754.5	31.8	— 0.1	94	NW	.....	.....	2	.....	10	.....	.....	0.177	4.5	.....	Dr. T. Stanecki.
Nyiregyhaza	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Habzsuda Daniel.
Pola	.....	.....	30.03	762.7	48.7	9.3	75	ESE	.....	.....	2	.....	10cs	.....	.....	0	0	.....	I.R.Hydrographic Of'ce.
Szegedin	.....	.....	29.89	759.1	41.0	5.0	81	S	.....	.....	2	.....	5	.....	.....	0.039	1.00	.....	Karl Stancel.
Trieste	.....	.....	30.06	763.5	48.9	9.4	76	SSE	.....	.....	1	.....	9	.....	.....	0	0	.....	Prof. V. Farolfi.
Vienna	.....	.....	30.03	762.7	49.1	9.5	59	NW	.....	.....	3	.....	2	.....	.....	0.461	11.7	.....	I. R. Central Met. Obs,y.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
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.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 7 p. m., local time. The elevation of Gratz is 343.5 meters, or 1,126.9 feet; Hermannstadt, 407.8 meters, or 1,337.9 feet; Kremsmünster, 383.6 meters, or 1,258.5 feet.

BELGIAN SERIES.

Furnished by the cooperation of J. C. Houzeau, Director of the Royal Observatory at Brussels.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Arlon	.....	.....	30.21	767.2	44.8	7.1	97	WSW	.....	.....	0	.....	10	.....	.....	0.134	3 4	.....	Royal Observatory.
Brussels	.....	.....	30.17	766 3	48.2	9.0	70	WNW	.....	.....	2	.....	10ks	.....	NW	0	0	Covered	
Furnes	.....	.....	30.17	766.3	47.8	8.8	74	NW	.....	.....	2	.....	5	.....	.....	0.004	0.1	.....	
Maeseyck	.....	.....	30.17	766.3	47.7	8.7	90	W	.....	.....	4	.....	10	.....	.....	0	0	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—In the originals, the weather is occasionally given in general notes.

BRITISH SERIES

Furnished by the coöperation of Robert H. Scott, Esq., Director of the Meteorological Office, London, Alexander Buchan, Secretary of the Scottish Meteorological Society, Edinburgh, and the respective Observers.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Aberdeen			29.82	757.4	44.7	7.1		W	13	5.8			4			0.010	0.25	Blue sky	William Boswell.
Ardrossan			30.02	762.5	45	7.2		W			3		8					Showery	William McNeil.
Armagh, Observatory			30.15	765.8	44.8	7.1		SW	13	5.8			7					*D. clouds	S. Call, for Dr. Robinson.
Bidston (Liverpool Obs.)			30.17	766.3	45.0	7.2		W	25	11.2			8					Overcast	John Hartnup.
Birr Castle, (Parsonstown)			30.22	767.6	45.4	7.4		SW			1		9					*D. clouds	J. Dreyer.
Bradford			30.10	764.5	45.5	7.5		W			2		3			0.01	0.3	*D. clouds	J. McLandsborough.
Bridgetown, (Barbados)			30.04	763.0	79.0	26.1		NE			2		6					*D. clouds	Sergt. J. F. Halanen, A.
Cambridge, Observatory			30.19	766.8	48.0	8.9		NW			1		5			Blank	Blank	*D. clouds	H. Todd. [H.C.
Cardington			30.19	766.8	47.6	8.7		NW			1		2					*D. clouds	John McLaren.
Carlisle																			T. Bell, for J. Cartmell.
Chatham, School M. E.			30.20	767.1	48.2	9.0		Calm			0		3					Gloomy	Capt. Fellows, R. E.
Dartmoor	28.80	731.5	30.34	770.6	44.0	6.7		W			2		8					Fine	R. E. Power.
Davos Platz, (Switzerland)	24.96	634.0			35.4	1.9	79	NE			1		10			0.11	2.8	Overcast	Francis Redford, M. A.
Donaghadee			30.08	764.0	46	7.8		WNW			3		0					Blue sky	J. Mac Gowan.
Dover			30.19	766.8	48	8.9		W			2		5					½ clouded	J. Costello.
Eccles, (near Manchester)			30.15	765.8	44.9	7.2		WSW	3.4	1.5			8					*D. clouds	Thomas Mackereth.
Falmouth, Observatory			30.29	769.4	48.5	9.2		SSW			1		10					Rain & fog	The Staff.
Fort Napier, (Natal)	27.72	704.1	29.96	761.0	67.6	19.4		E			2		10					Overcast	P'vt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.95	760.7	86	30.0		NW			0		2					*D. clouds	
Galway, Queen's College			30.15	765.8	48	8.9		W			1		8					Gloomy	Prof. A. H. Curtis.
Gibraltar, (Mediterranean)			30.40	772.1	64.6	18.1		NE			1		1					*D. clouds	Corpl. C. Aitken, A.H.C.
Glasgow, Observatory			29.98	761.5	44.1	6.7		W			3		7					*D. clouds	Lewis Stuart.
Great Yarmouth			30.12	765.0	46	7.8		WNW			3		4					Hazy	G. T. Watson.
Greenwich, Royal Obs'y			30.21	767.3	50.7	10.4		WNW			1		8			Blank	Blank	*D. clouds	The Staff, for G. B. Airy.
Guernsey			30.29	769.4	51	10.6		WNW			2		7					*D. clouds	Dr. S. E. Hoskins.
Helston			30.30	769.6	51	10.6		SE			0		10n			0.17	4.3	Raining	M. P. Moyle.
Holyhead			30.18	766.6	45	7.2		W			4		3					*D. clouds	John Tilston.
Kew, Observatory			30.22	767.6	49.5	9.7		WNW	13	5.8			4					*D. clouds	The Staff.
Kingstown			30.22	767.6	45	7.2		W			4		6					*D. clouds	George Mitchell.
Leicester Museum			30.19	766.8	47.9	8.8		SW			1		6					*D. clouds	Wm. J. Harrison, F.G.S.
Malta, (Mediterranean)			30.21	767.3	58.6	14.8		NW			3		6k					*D. clouds	Corp'l. P. Bravis, A.H.C.
Nairn			29.81	757.2	41	5.0		SW			3		10					Overcast	W. D. Penny.
Nassau, (Bahamas)			29.95	760.7	75.0	23.9		SW			1		4					*D. clouds	Surg. Maj. Henry.
Nottingham, Observatory			30.17	766.3	45.2	7.9		WNW			3		5k		W	0	0	*D. clouds	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			30.18	766.6	44.1	6.7		W			4		8					*D. clouds	Rev. Stephen Whitty.
Oxford, Radcliffe Obs'y			30.20	767.1	49	9.4		W			2		7					*D. clouds	J. Lucas.
Plymouth			30.28	769.1	49.5	9.7		WSW			1		10					Overcast	John Merrifield.
Roche's Point			30.23	767.8	48	8.9		NNW			2		8					Dull	W. Kennedy.
Saint Ann's Head			30.24	768.1	48	8.9		WNW			1		7					*D. clouds	John C. Walker.
Saint Helier, (Jersey)			30.31	769.6	53.2	11.8		NW			3		8					¾ clouded	A. P. Amy.
Sandwick Manse, (Orkneys)			29.64	752.8	38.1	3.6		W	33	14.8			10					Showery	Rev. C. Clouston, LL. D.
Scarborough																			F. Shaw.
Scutari Cemetery, (Turkey)			29.76	755.9	40.0	4.4		SW			4		10			Cloud	Blank	Overcast	Sergt. W. H. Lyne.
Sheffield			30.13	765.3	47.2	8.4		NW			3		3			0	0	Blue sky	W. F. Cooper.
Silloth Rectory			30.04	763.0	44.0	6.7	84	W			5		5			0	0	*D. clouds	Rev. Francis Redford
Stonyhurst, Observatory			30.13	765.3	44.5	6.9		W			4		4					Blue sky	Rev. S. J. Perry.
Stornoway, Lewis C., (Hebr.)			29.73	755.1	41	5.0		W			6		10					Hailing	John Smith.
Stratfield Turgiss			30.24	768.1	50.1	10.1		W			1		6					*D. clouds	Rev. Charles H. Griffith.
Thurso			29.67	753.6	42	5.6		WSW			5		7					Gloomy	John Trotter.
Truro, Royal Institution			30.25	768.3	50	10.0		W			4		10					Raining	W. Newcombe.
Valencia, Observatory			30.24	768.1	49.2	9.6		NE	3	1.3			8					*D. clouds	The Staff.
SUB-SERIES.																			
Calf of Man, (Isle of Man)																			Henry Mercer.
Cape Good Hope, Obs'y			30.01	762.2	74.7	23.7	57	S	24	10.7		0	0						The Staff, for E. J. Stone.
Hobart Town, (Tasmania)			29.82	757.4	77.0	25.0	94	N			3		4k			0	0	Hazy	Francis Abbott, F.R.A.S.
Leith, Restalrig Park			29.94	760.5	44.9	7.2		W			6		8k			0	0	Cloudy	Andrew Gibb.
Mauritius, Observatory			29.76	755.9				N	2.7	1.2						0.64	16.3		C. Meldrum.
Melbourne, Observatory			29.87	758.7	77.3	25.2	58	ENE	5	2.2			7			0	0	Dense haze	R. L. J. Ellery.
Monach L't-house, (Hebrides)																			J. Youngclause.
North Unst, (Shetland Is.)			29.37	746.0	40	4.4		W			8	5	7	NW		Blank	Blank		Robert Burnet.

NOTE.—Generally, the originals do not give the relative humidity, rain-fall, or distinction between upper and lower clouds. The originals give the wind direction to 32 points and weather by the Beaufort notation. The originals give the barometer for Aberdeen, Cardington, Galway, Oxford, St. Heller, Sandwick, Scarborough, Stonyhurst, Leith, Monach and North Unst as read off and the amount of cloudiness for Stornoway by the scale 0 to 4. The wind-force is given by the scale 0 to 12 in the official series; 0 to 6 in the sub series; except in lbs. per square foot for Greenwich and Hobart Town. The rain-fall is measured at Aberdeen at 10 a. m.; Bradford, 9 a. m.; Hobart Town, 7:30 a. m.; Nottingham, 6 p. m.; Mauritius, 9 a. m., local time. The elevation of Dartmoor is 1,400 feet, or 426.7 meters; Davos Platz, 5,105? feet, or 1,556.0? meters; Fort Napier, 2,220 feet, or 670.6 meters. *Detached clouds.

By authority of the MINISTER OF FOREIGN AFFAIRS.

COSTA RICA SERIES.

Furnished by the coöperation of Senor Federico Maison, Director of the Central Office of Statistics and Meteorology.

STATIONS.																				
San José																				

DANISH SERIES.

Furnished by the cooperation of Captain N. Hoffmeyer, Director of the Royal Danish Meteorological Institute at Copenhagen.

STATIONS.																				
Copenhagen			29.76	756.0	39.9	4.4	82	WNW			2		7							
Fanöe			29.87	758.6	40.5	4.7	90	WSW			4		5							
Godthaab, (Greenland)			29.94	760.4	11.3	—11.5	82	E			2		2							
Stykkisholm, (Iceland)			29.39	746.6	24.8	— 4.0	91	NE			0		8							
Thorshavn, (Faröe)			29.37	745.9	36.1	2.3	65	WNW			6		7							
Vestervig			29.71	754.5	40.3	4.6	94	WNW			6		2						Snow & hail	

NOTE.—The originals give the wind-force by the scale 0 to 6; occasionally, weather by Vienna symbols; no distinction between the amount of upper and lower clouds.

FRENCH SERIES.

Furnished by the coöperation of His Excellency, U. J. Le Verrier, Director of the Paris Observatory, and the respective Observers.

STATIONS.	Barometer. Corrected for instru'tal error and temperature. Inches.	Barometer. Corrected for instru'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow, in the past 24 hours. Inches.	Rain-fall or melted snow, in the past 24 hours. Millimeters.	Weather.	Observer.
Alençon	.....	.....	30.31	769.8	48.2	9	78	WNW	.....	.....	3	.....	5k	.....	WNW	0	0	Cloudy	Normal School.
Amiens	.....	.....	30.17	766.2	52.2	11.2	87	NE	.....	.....	3	.....	2	.....	NE	0.134	3.4	Slightly cl'dy	Normal School.
Avignon	.....	.....	30.23	767.8	59.0	15	47	N	.....	.....	8	.....	0	.....	.....	0	0	Very clear	Normal School.
Bar-sur-Seine	.....	.....	30.28	769.0	48.0	8.9	91	WSW	.....	.....	2	.....	10	.....	.....	0.094	2.4	Raining	C. Saillard.
Beaumette, (near Angers)	.....	.....	30.33	770.4	56.3	13.5	68	SW	12.5	5.6	.....	.....	.....	.....	NW	0.051	1.3	.....	Beaumette Observ'tory.
Beauvais	.....	.....	30.21	767.3	52.3	11.3	86	WNW	.....	.....	2	.....	10	.....	WNW	0.08	2.	Covered	Normal School.
Besançon	.....	.....	30.34	770.6	50.0	10	84	S	.....	.....	3	.....	8	.....	SW	0.12	3.	Very cloudy	Normal School.
Bourg en Bresse	.....	.....	30.40	772.1	49.8	9.9	79	W	.....	.....	1	.....	5kn	.....	E	0.094	2.4	Cloudy	Normal School.
Bourges	.....	.....	30.32	770.2	50.0	10	100	SW	.....	.....	2	.....	10	.....	SW	0.146	3.7	Covered	Normal School.
Brest	.....	.....	30.28	769.1	53.8	12.1	87	WSW	.....	.....	4	.....	10	.....	WSW	0	0	Misty	Naval Observatory.
Carcassonne	.....	.....	30.39	771.9	51.4	10.8	58	W	.....	.....	1	.....	2	.....	E	0	0	Slightly cl'dy	Normal School.
Caen	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Chartres	.....	.....	30.20	767.0	50.9	10.6	93	W	.....	.....	4	.....	10	.....	E	0	0	Covered	Normal School.
Châlons-sur-Marne	.....	.....	30.22	767.5	48.6	9.2	92	W	.....	.....	4	.....	10	.....	E	0.189	4.8	Light rain	Normal School.
Clermont	.....	.....	30.35	770.9	51.3	10.7	60	WNW	.....	.....	2	.....	8	.....	WNW	0.008	0.2	.....	Puy de Dome Obs'y.
Commercy	.....	.....	30.30	769.6	47.7	8.7	93	W	.....	.....	2	.....	10	.....	.....	0.106	2.7	Covered	Normal School.
Commune de Gréasque*	.....	.....	30.16	765.7	54.9	12.7	43	NW	.....	.....	6	.....	2	.....	NW	0	0	.....	M. Kina.
Grenoble	.....	.....	30.34	770.7	46.6	8.1	76	NW	.....	.....	2	.....	5kn	.....	SW	0	0	Cloudy	Normal School.
La Roche-sur-Yon	.....	.....	30.50	774.6	55.0	12.8	86	SW	.....	.....	6	.....	10	.....	.....	0.051	1.30	Covered	Normal School.
Le Mans	.....	.....	30.31	769.8	53.2	11.8	83	WNW	.....	.....	4	.....	8	.....	W	0	0	Very cloudy	Normal School.
Lons-Le-Saulnier	.....	.....	30.35	770.8	50.4	10.2	84	S	.....	.....	1	.....	5	.....	.....	0.559	14.20	Cloudy	Normal School.
Lorient	.....	.....	30.36	771.1	56.8	13.8	69	W	.....	.....	4	.....	5	.....	W	0	0	Cloudy	Naval Observatory.
Mâcon	.....	.....	30.40	772.1	50.4	10.2	86	Calm	.....	.....	0	.....	8	.....	E	0.055	1.4	Very cloudy	Normal School.
Metz	.....	.....	30.27	768.9	45.9	7.7	99	SW	.....	.....	4	.....	10	.....	SW	0.177	4.5	Covered	M. Schuster.
Mirecourt	.....	.....	30.26	768.7	46.9	8.3	94	SW	.....	.....	2	.....	10	.....	ESE	0.16	4.	Covered	Normal School.
Nismes	.....	.....	30.34	770.6	60.1	15.6	47	W	.....	.....	4	4c	.....	NW	.....	0	0	Slightly cl'dy	Normal School.
Orleans	.....	.....	30.30	769.5	51.8	11	90	W	.....	.....	4	.....	10	.....	W	0	0	Covered	Normal School.
Paris, Observatory	.....	.....	30.21	767.4	51.6	10.9	88	WSW	.....	.....	2	.....	10k	.....	W	0.139	3.63	Rainy	National Observatory.
Parthenay	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Privas	.....	.....	30.33	770.3	52.7	11.5	46	NNE	.....	.....	2	.....	5	.....	NNE	0	0	Cloudy	Normal School.
Rochefort, Observatory	.....	.....	30.40	772.1	55.2	12.9	81	W	.....	.....	3	.....	8	.....	E	0	0	¾ covered	Naval Observatory.
Rouen	.....	.....	30.20	767.0	53.2	11.8	86	W	.....	.....	2	.....	10	.....	.....	0.189	4.8	Covered	Normal School.
Saint Lo	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Tarbes	28.34	745.1	30.43	773.0	53.6	12	54	W	.....	.....	2	.....	2	.....	E	0	0	Slightly cl'dy	Normal School.
Villefranche	.....	.....	30.66	778.8	54.0	12.2	77	WNW	.....	.....	3	.....	5	.....	W	0	0	Cloudy	Normal School.
SUB-SERIES.																			
Fort de France, Martinique	.....	.....	29.89	759.2	75.2	24	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	L'Abbé Marchési.
Marseilles	.....	.....	30.12	765.1	58.1	14.5	50	NW	.....	.....	6	.....	1	.....	.....	0	0	Partly cl'dy	Marseilles Observatory.
Mont-Louis	25.09	637.2	30.40	772.2	42.4	5.8	57	NNW	14.9	6.66	.....	.....	0	.....	.....	0	0	.....	—. Falguère.
Montsouris, Paris	.....	.....	30.20	767.1	51.6	10.9	87	W	.....	.....	3	.....	10	.....	W	0.142	3.6	.....	Montsouris Observatory
Perpignan	.....	.....	30.37	771.5	55.9	13.3	68	NE	26.1	11.67	.....	.....	1	.....	NW	0	0	.....	Dr. Fines.
Pic du Midi, (Summit,) H. P.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. Baylac.
Pic du Midi, (Plantade,) H. P.	22.72	577.1	.....	.....	38.3	3.5	.....	N	.....	.....	2	.....	0	.....	.....	0	0	Clear	General de Nansouty.
Saint Maur, (near Paris)	.....	.....	30.21	767.3	51.1	10.6	91	WSW	.....	.....	1	.....	10	.....	.....	0.118	3.0	Very cloudy	E. Renou.
Toulouse	.....	.....	30.47	773.9	51.4	10.8	70	WNW	.....	.....	1	.....	7	.....	.....	Inap.	Inap	.....	Toulouse Observatory.
Tours	.....	.....	30.30	769.7	55.0	12.8	75	W	.....	.....	3	.....	10	.....	W	0.012	0.3	.....	C. Marquet.
Versailles, (near Paris)	.....	.....	30.21	767.3	51.4	10.8	90	W	.....	.....	2	.....	10	.....	.....	0.166	4.21	Covered	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai)	.....	.....	30.24	768.0	33.8	1.0	77	ENE	6.6	2.67	.....	.....	10	.....	.....	0	0	.....	Marc Dechevrens, S. J.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—Generally, the originals give the wind-force by the scale 0 to 7; no distinction between upper and lower clouds, and, in the official series, the amount by the scale 0 to 4 the rain-fall as measured at 7, 8 or 9 a. m., local time; at Clermont, 9 a. m. of the following day; the weather in general terms as published. The elevation of Clermont is 388 meters, or 1,272.9 feet; Commune de Gréasque, 322 meters, or 1,056.4 feet; Tarbes, 308 meters, or 1,010 feet; Mont-Louis, 1,586.40 meters, or 5,204.8 feet; Pic du Midi, (Summit,) 2,877 meters, or 9,439.1 feet; Pic du Midi, (Plantade,) 2,366 meters, or 7,762.6 feet. In correcting the Mont-Louis barometric observations for altitude, the constant 135. millimeters has been added. *Bouches-du-Rhône

GERMAN SERIES.

Furnished by the coöperation of Professor Dr. G. Neumayer, Director of the German Naval Observatory, Hamburg.

Bamberg	.....	.....	30.07	763.8	47.3	8.5	69	W	.....	.....	3	.....	8	W	.....	0.197	5.0	Raining	Prof. T. Hoh.
Berlin	.....	.....	30.00	762.1	46.4	8.0	76	NW	.....	.....	3	.....	9	.....	.....	0.035	0.9	.....	Prof. Arndt.
Breslau	.....	.....	29.94	760.4	44.4	6.9	61	NW	.....	.....	6	.....	7	.....	.....	0	0	.....	Royal University Obs'y.
Carlsruhe	.....	.....	30.17	766.4	46.9	8.3	96	SW	.....	.....	3	.....	10	.....	.....	0.173	4.4	Raining	A. Senz.
Cassel	.....	.....	30.13	765.3	46.0	7.8	67	WNW	.....	.....	2	.....	6	WNW	.....	0.205	5.2	.....	Dr. H. Möhl.
Crefeld	.....	.....	30.13	765.2	47.8	8.8	78	W	.....	.....	4	.....	9	.....	.....	0.07	17.	Raining	Director Lose.
Emden	.....	.....	30.15	765.9	46.9	8.3	64	WNW	.....	.....	3	.....	2	.....	.....	0.008	0.2	.....	Prof. Prestel.
Frankfort on the Main	.....	.....	30.22	767.5	50.0	10.0	67	W	.....	.....	2	.....	9	.....	.....	0.110	2.8	.....	Physical Society.
Friedrichshafen	28.70	731.2	30.26	768.6	45.3	7.4	89	W	.....	.....	4	.....	10	.....	.....	0.524	13.3	Raining	M. Wilhelm.
Hamburg	.....	.....	30.00	761.9	44.4	6.9	81	WNW	.....	.....	5	.....	6c,k	WNW	.....	0.008	0.2	.....	Captain F. Hegemann.
Kiel	.....	.....	29.92	759.9	42.8	6.0	83	W	.....	.....	6	.....	5	.....	.....	0	0	.....	Prof. G. Karsten.
Königsberg, (Prussia)	.....	.....	29.61	752.0	35.4	1.9	84	W	.....	.....	5	.....	9	.....	.....	0.110	2.8	Snowing	Prof. E. Luther.
Koslin	.....	.....	29.85	758.1	36.7	2.6	.....	NW	.....	.....	4	.....	10	.....	.....	0.933	23.7	.....	H. Müller.
Leipsic	.....	.....	30.06	763.5	46.0	7.8	71	W	.....	.....	2	.....	9	WNW	.....	0.417	10.6	.....	Prof. Bruhns.
Memel	.....	.....	29.56	750.8	34.3	1.3	92	W	.....	.....	3	.....	10ks	.....	.....	0.020	0.5	.....	Reinbrecht & Skalweit.
Münster	.....	.....	30.08	764.0	45.7	7.6	97	SW	.....	.....	3	.....	10	.....	.....	0.472	12.0	.....	Prof. E. Heis.
Neufahrwasser	.....	.....	29.70	754.4	38.7	3.7	72	WNW	.....	.....	6	.....	1	.....	.....	0.012	0.3	.....	A Lothe.
Posen	.....	.....	29.88	759.0	41.2	5.1	72	WNW	.....	.....	8	.....	8	.....	.....	0.036	0.9	.....	Dr. Magener.
Strassburg, (in Alsace)	.....	.....	30.24	768.1	48.4	9.1	93	SW	.....	.....	1	.....	10	NW	.....	0.213	5.4	Raining	Dr. Schur.
Stuttgart	.....	.....	30.17	766.4	46.0	7.8	93	W	.....	.....	1	.....	10	.....	.....	0.177	4.5	Raining	Prof. Schoder.
Thorn	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Dr. Hasenbalg.
Treves, (Trier)	.....	.....	30.11	764.7	48.4	9.1	90	SW	.....	.....	3	.....	10	.....	.....	0.020	0.5	Foggy	Prof. Flesch.
Weissenburg, (Bavaria)	28.60	726.5	30.14	765.5	45.5	7.5	77	WNW	.....	.....	4	.....	9	NW	.....	0.594	15.1	Raining	Dr. von Bebber.
Wustrow, Naval School	.....	.....	29.97	761.3	37.4	3.0	85	W	.....	.....	5	.....	5	.....	.....	0	0	.....	E. F. Schütz.
GERMAN NAVAL SERIES.																			

NOTE.—The elevation of Friedrichshafen is 413.4 meters, or 1,356.3 feet; Weissenburg, 431 meters, or 1,414.0 ft. In the originals the distinction between the amount of upper and lower clouds is not made. It is not always certain that the remarks in the weather column refer to the moment of observation.

GREEK SERIES.

Furnished by the coöperation of Professor Dr. J. F. Julius Schmidt, Director of the Royal Observatory at Athens.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Athens			29.95	760.6	56 5	13.6		W										Very clear...	

Note.—The originals give the barometer corrected, but not reduced to sea-level; occasionally the kind of clouds; the weather as published. They omit the humidity, wind-force, amount of cloudiness and rain-fall.

ITALIAN SERIES.

Furnished by the coöperation of His Excellency the Minister of Agriculture, Industry and Commerce, and the respective Observers.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Udine			30.04	763.0	44.4	6.9	64	Calm	0	0			7			0	0		Prof. Giovanni Clodig.
Stelvio	22.17	563.2			27.5	— 2.5		SE			1		10			0	0		Signora Ernesta Manfredi.
Valdobbia	22.32	566.8			27.3	— 2.6	66	W			1		2	N		0	0		Ab. Dom. Mongini.
Padua			30.03	762.8	42.1	5.6	68	N	1.8	0.8			7	NW		0	0		Prof. Dott. Lorenzoni.
Vicenza			30.04	763.0	43.2	6.2	72	SE	0.7	0.3			6	N		0	0		Conte Alm. Da Schio.
Verona			30.03	762.8	44.6	7.0	71	E			1		10			0	0		Dott. B. Bertoncelli.
Bergamo	28.67	728.2	30.03	762.8	48.6	9.2	51	S			2		2			0	0		Prof. Trionfini Carlo.
Domodossola			30.05	763.2	60.8	16.0	28	N			6		1			0	0		Prof. Giuseppe Colza.
Milan			30.10	764.4	54.3	12.4	59	W			2		6	W		0	0		Ab. Gio. Capelli.
Pavia			30.02	762.5	51.3	10.7	70	WSW			6		1	W		0	0		Prof. Gio. Cantoni.
Moncalieri			30.08	764.1	47.5	8.6	68	N	0.7	0.3			3	NW		0	0		Prof. P. F. Denza.
Mondovi	28.12	714.3	30.10	764.4	54.0	12.2	52	NNW			2		1	NW		0	0		Prof. D. C. Bruno.
Porto Maurizio			30.15	765.7	54.3	12.4	65	E			2		5	NW		0	0		Prof. L. Vassallo.
Genoa			30.11	764.8	55.0	12.8	54	SW	1.3	0.6			10	NE		0	0		Prof. G. M. Garibaldi.
Piacenza			30.04	762.9	48.0	8.9	64	E	5.6	2.5			3			0	0		Dott. G. Manzi.
Parma			30.04	763.1	50.2	10.1	62	NE			2		1			0	0		Prof. P. Pigorini.
Florence			30.13	765.4	50.4	10.2	83	N			2		9			0	0		Cav. F. Meucci.
Leghorn			30.11	764.8	55.0	12.8	74	SW	0	0			10	WSW		0	0		Prof. P. Monte.
Siena	28.87	733.4	30.12	765.1	46.8	8.2	75	SW	0	0			10	W		0	0		Prof. L. Toscani.
Urbino	28.50	723.9	30.12	765.1	48.2	9.0	66	SW			2		8			0	0		Prof. P. Serpieri.
Pesaro			30.07	763.7	45.9	7.7	87	NW	19.2	8.6			10	NW		0	0		Prof. Luigi Guidi.
Ancona			30.07	763.7	50.4	10.2	72	Calm			0		10			0	0		Prof. F. De— Bosis.
Grosseto			30.11	764.9	56.8	13.8	55	NE			2		4	SE		0	0		Avv. P. Ponticelli.
Rome			30.12	765.0	57.6	14.2	64	SE	1.3	0.6			2	SSW		0	0		Prof's. P. Secchi & L. Respighi.
Naples, O. U.			30.15	765.9	57.2	14.0	58	SW			1		10	NW		0	0		Prof. L. Palmieri.
Lecce			30.10	764.4	55.0	12.8	49	NNE	9.4	4.2			6	N		0	0		Prof. C. De—Giorgi.
Cosenza			30.21	767.3	55.6	13.1	76	NW	9.4	4.2			7			0	0		Prof. F. D. Conti.
Cagliari			30.16	766.0	57.2	14.0	58	NW			4		9	NW		0	0		Prof. A. Pacinotti.
Ilposto, (Sicily)			30.13	765.2	57.2	14.0	65	S			2		1			0	0		Prof. F. Cafiero.
Palermo			30.15	765.7	59.9	15.5	49	WSW	8.7	3.9			8			0	0		Prof. G. Cacciatore.
Caltanissetta	28.18	715.7	30.20	767.0	45.1	7.3	71	WNW			2		3	E		0	0		Prof. A. Pagani.
Siracusa			30.21	767.3	56.7	13.7	57	ESE			1		6	WSW		0	0		Prof. V. Giuliano.
Sub-Series.																			
Naples, S. R.			30.17	766.4	50.0	10.0	72	WSW	1.8	0.8			10	NW		0	0		Prof. F. Brioschi.

Note.—The originals give the wind-force by the scale 0 to 4, or the velocity in kilometers per hour; generally, no distinction between upper and lower clouds occasionally the weather by the Vienna symbols. The elevation of Stelvio is 2,543.0 meters, or 8,342.9 feet; Valdobbia, 2,548.0 meters or 8,359.3 feet; Bergamo, 379.6 meters, or 1,245.3 feet; Mondovi, 556 meters, or 1,824.2 feet; Siena, 348.5 meters, or 1,143.3 feet; Urbino, 451 meters, or 1,479.7 feet; Caltanissetta, 570.3 meters, or 1,871.0 feet.

JAPANESE SERIES.

Furnished by the coöperation of the Imperial University of Tokei, Japan.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Tokei			29.98	761.5	38	3.3		NE	4	1.8			10			0	0		Prof. P. V. Veeder.

Note.—The originals give the amount of cloudiness by the scale 0 to 4 without distinguishing between upper and lower clouds. The rain-fall is measured at 7 a. m., local time.

MEXICAN SERIES.

By authority of the Secretary of Public Works.

Furnished by the coöperation of Senor Mariano Barcena, Director of the Central Meteorological Observatory in the City of Mexico.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Mexico																			Mariano Barcena.
																			Vicente Reyes.
																			Miguel Perez.
																			(Engineers in charge.)

Note.—The elevation of Mexico is 2,290 meters, or 7,512.9 feet. The rain-fall is measured at 6 a. m., local time.

NETHERLANDS' SERIES.

Furnished by the coöperation of Professor Buys Ballot, Director of the Royal Meteorological Institute of the Netherlands at Utrecht.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Flushing			30.23	767.8	45.7	7.6		NW			2					0.138	3.5		
Groningen			30.01	762.2	44.4	6.9										0.012	0.3		
Helder			30.08	764.1	45.5	7.5		WSW			2					0	0		
Utrecht			30.09	764.3	49.8	9.9	73	WSW			3		5			0.039	1.0	Cloudy	

Note.—The originals give the wind-pressure in kilograms per square meter; for Utrecht, they give the weather as published, from which the amount of cloudiness is taken by the scale 0 to 4, without distinguishing between upper and lower clouds. It is assumed that the barometer readings have been reduced to sea-level.

NORWEGIAN SERIES.

Furnished by the coöperation of Professor H. Mohn, Director of the Royal Norwegian Meteorological Institute at Christiania.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Bergen			29.48	748.8	37.8	3.2	76	SSW	23.9	10.7			10			0.532	13.5		
Brönö			29.10	739.0	33.1	0.6	89	S	24.6	11			10					Snowing	
Christiania			29.42	747.3	29.5	— 1.4	82	WNW	0	0			7			0	0		
Tromsö			29.07	738.4	27.5	— 2.6	74	SW	17.6	8			5			0	0		

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols. The cloudiness and weather at Bergen refer to 2h., p. m., local time, instead of 1h., 4 min.

PORTUGUESE SERIES.

Furnished by the coöperation of J. C. de Brito Capello, Director of the Meteorological Observatory of the Infante Don Luiz at Lisbon.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Angra, (Azores)	.....	.....	30.21	767.3	60 4	15.8	89	SE	8.1	3.6	.....	.....	5	.....	.....	0	0	.....	Dr. J. A. Sampaio.
Campo Maior	.....	.....	30.39	772.0	62 4	16.9	43	SE	1.3	0.6	.....	.....	0	.....	.....	0	0	.....	Dr. A. M. R. dos Santos.
Funchal, (Madeira)	.....	.....	30.33	770.3	64.8	18.2	60	ESE	8.7	3.9	.....	.....	0	.....	.....	0	0	.....	Capt. D. A. de Cunha.
Lisbon	.....	.....	30.46	773.7	57.7	14.3	57	SW	2.5	1.1	.....	.....	1	.....	.....	0	0	.....	The Observatory.
Ponta Delgada, (Azores)	.....	.....	30.27	768.8	60.1	15.6	85	SSE	7.4	3.3	.....	.....	3	.....	.....	0.055	1.4	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

Note.—The originals give the wind-velocity in kilometers per hour; occasionally, the weather by the Vienna symbols; the amount of cloudiness without distinguishing between upper and lower clouds; the barometer corrected but not reduced to sea-level. The rain-fall at Lisbon is measured at noon, instead of 0 h. 6 m., p. m.

RUSSIAN SERIES.

Furnished by the co-operation of Professor H. Wild, Director of the Imperial Central Physical Observatory of Russia, at St. Petersburg.

Warsaw	.....	.....	29.75	755.7	36.5	2.5	80	W	20	9	.....	.....	9	.....	.....	.....	.....	.....	Astronomical Obs.
Wilna	.....	.....	29.66	753.4	24.4	— 4.2	77	SSE	2	1	.....	.....	10	.....	.....	.....	.....	.....	Astronomical Obs.
Dorpat	.....	.....	29.62	752.4	22.5	— 5.3	91	S	7	3	.....	.....	10	.....	.....	.....	.....	.....	Physical Cabinet.
St. Petersburg	.....	.....	29.67	753.5	19.0	— 7.2	92	SSE	16	7	.....	.....	10	.....	.....	.....	.....	.....	Central Physical Obs.
Kuopio	.....	.....	29.51	749.6	20.8	— 6.2	100	S	13	6	.....	.....	10	.....	.....	.....	.....	.....	Ch. Forsten.
Kieff	.....	.....	29.59	751.6	23.9	— 4.5	95	N	11	5	.....	.....	10	.....	.....	.....	.....	.....	Physical Cabinet.
Nikolaiev	.....	.....	29.50	749.2	32.5	0.3	89	NW	34	15	.....	.....	10	.....	.....	.....	.....	.....	Kurdakof.
Kertch	.....	.....	29.54	750.3	36.1	2.3	94	SW	9	4	.....	.....	10	.....	.....	.....	.....	.....	Lagorio.
Moscow	.....	.....	29.87	758.8	11.8	—11.2	79	SE	2	1	.....	.....	10	.....	.....	.....	.....	.....	Meteorological Obs.
Lugan	.....	.....	29.58	751.4	20.8	— 6.2	84	E	4	2	.....	.....	9	.....	.....	.....	.....	.....	Meteorological Obs.
Archangel	.....	.....	29.92	760.0	— 6.5	—21.4	88	SE	27	12	.....	.....	8	.....	.....	.....	.....	.....	Ogorodnikof.
Tiflis	28.43	722.2	29.80	759.2	38.7	3.7	71	Calm	0	0	.....	.....	7	.....	.....	.....	.....	.....	Physical Observatory.
Astrakhan	.....	.....	29.88	759.0	29.1	— 1.6	68	S	4	2	.....	.....	7	.....	.....	.....	.....	.....	Sebastianof.
Kasan	.....	.....	30.13	765.2	— 8.5	—22.5	79	ESE	7	3	.....	.....	10	.....	.....	.....	.....	.....	Physical Cabinet.
Orenburg	.....	.....	30.05	778.4	0.7	—17.4	68	E	13	6	.....	.....	0	.....	.....	.....	.....	.....	Tschernischei.
Ekaterinburg	29.24	742.6	30.34	770.6	—18.2	—27.9	74	NE	2	1	.....	.....	0	.....	.....	.....	.....	.....	Meteorological Obs.
Nukuss	.....	.....	29.99	761.8	39.9	4.4	65	ESE	4	2	.....	.....	1	.....	.....	.....	.....	.....	
Kasaly	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Bobrof.
Tashkend	28.59	726.2	30.41	772.4	29.3	— 1.5	80	Calm	0	0	.....	.....	0	.....	.....	.....	.....	.....	Michelson.
Barnaul	.....	.....	30.62	777.7	—17.7	—27.6	73	NE	4	2	.....	.....	0	.....	.....	.....	.....	.....	Meteorological Obs.
Yeniseisk	.....	.....	30.58	776.7	—22.4	—30.2	71	Calm	0	0	.....	.....	0	.....	.....	.....	.....	.....	Marks.
Irkutsk	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Usolzef.
Peking, (China)	.....	.....	30.27	768.8	24.6	— 4.1	84	Calm	0	0	.....	.....	9	.....	.....	.....	.....	.....	Physical Observatory.
Nertchinsk	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Meteorological Obs.
Vladivostock	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Nikolaievsk, on the Amoor	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols; they omit the rain-fall. The elevation of Tiflis is 409 meters, or 1,341.8 feet; Ekaterinburg, 306.4? m., or 1,005.2? ft.; Tashkend, 494.2? m., or 1,621.3? ft.; Irkutsk, 392 m., or 1,286 ft.; Nertchinsk, 592.0? m., or 1,942.2? ft.

SPANISH SERIES.

Furnished by the cooperation of Antonio Aguilar, Director of the Royal Observatory at Madrid, and of Don Cecilio Pujazon, Captain R. N. Director of the Naval Observatory at San Fernando.

Madrid	.....	.....	30.41	772.5	54.7	12.6	53	S	3.7	1.67	.....	1	0	NE	.....	0	0	Slightly cl'dy	Royal Observatory.
San Fernando	.....	.....	30.42	772.7	66.4	19.1	48	NE	0	0	.....	0	0	....	.....	.....	.....	.....	Naval Observatory.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

Note.—The originals give the weather in general terms, as published; rain-fall for San Fernando from preceding to following midnight; wind-velocity for Madrid in kilometers per hour.

SWEDISH SERIES.

Furnished by the cooperation of Professor R. Rubenson, Director of the Royal Swedish Meteorological Institute, at Stockholm, and of Dr. H. H. Hildebrandsson, Chief of the Meteorological Division of the Upsala Observatory.

Haparanda	.....	.....	29.41	746.9	22.3	— 5.4	100	S	.....	.....	4	.....	4	.....	.....	0	0	.....	
Umea	.....	.....	29.32	744.6	21.9	— 5.6	100	SW	.....	.....	2	.....	10	.....	.....	.....	.....	Snowing	
Hernosand	.....	.....	29.23	742.5	23.4	— 4.8	100	Calm	.....	.....	0	.....	10	.....	.....	.....	.....	Snowing	
Stockholm	.....	.....	29.37	746.0	32.0	0.0	85	WSW	.....	.....	2	.....	4	.....	.....	0.016	0.4	.....	
Wisby	.....	.....	29.52	749.7	34.2	1.2	82	NW	.....	.....	6	.....	0	.....	.....	0.083	2.1	.....	
Sub-Series.																			
Upsala	.....	.....	29.36	745.7	31.5	— 0.3	72	WSW	8.3	3.7	.....	.....	0	.....	.....	0.006	0.15	.....	Dr. Hildebrandsson.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

Note.—The originals give the wind-force by the scale 0 to 6, and Upsala also velocity in meters per second; occasionally, the weather by the Vienna symbols, or in general terms; no distinction between the amount of upper and lower clouds. The rain-fall is measured at 8 a. m., local time.

SWISS SERIES.

Furnished by the coöperation of Professor R. Wolf, Director of the Observatory at Zurich, and of Professor E. Plantamour, Director of the Observatory at Geneva.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Geneva	28.86	733.0	30.30	769.5	50.9	10.5	64	SSW	.....	.....	1	.....	9	.....	.....	0	0	Covered	The Observatory.
Zurich	28.61	726.7	30.28	769.0	45.9	7.7	84	W	.....	.....	1	.....	10	.....	.....	0.031	0.8	Raining	The Observatory.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—For Geneva the corresponding departures from the normal values are: Barometer, +6.3 mm; Thermometer, +7.6 cent.; Relative Humidity, —10 per cent.

NOTE.—The rain-fall is measured at Zurich at 7 a. m. on the following day. The originals give the barometer corrected but not reduced to sea-level; the wind-force by th scale 0 to 4 for Zurich; the amount of cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The elevation of Geneva is 408 meters, o 1,339 feet, and that of Zurich 470 meters, or 1,542 feet.

TURKISH SERIES.

Furnished by the coöperation of A. Coumbary, Effendi, Director of the Central Observatory at Constantinople, and of Professor C. V. A. Van Dyck, Superintendent of the Lee Observatory at Beirut.

Constantinople	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Fao, (Persian Gulf)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Salonica	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Valona	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Varna	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
SUB-SERIES.																			
Beirut, (Syria,) Lee Obs'y	.....	.....	29.87	758.7	59.0	15.0	72	SW	.....	.....	2	.....	7n	.....	SW	1.41	35.8	*D. clouds.....	Prof. C. V. A. Van Dyck.

NOTE.—The originals give the wind-force by the scale 0 to 7, (except Beirut, by the scale 0 to 12, and Constantinople velocity in meters per second;) the weather in general terms as published; no distinction between upper and lower clouds, and, except Constantinople and Beirut, the amount by the scale 0 to 4. It is assumed that the barometer is reduced to sea-level. * Detached clouds.

CANADIAN SERIES.

Furnished by the coöperation of Professor G. T. Kingston, Director of the Magnetic Observatory at Toronto, and Superintendent of the Meteorological Office of the Dominion of Canada, and the respective Observers. Those marked with a star (*) are also telegraphed daily to the office of the Chief Signal Officer, U. S. Army.

Bathurst, N. B	.....	.....	29.74	755.4	23.7	— 4.6	91	Calm	0	0	.....	.....	10	.....	.....	.....	.....	.....	Hon. J. Ferguson.
Brockville, Ontario	.....	.....	30.21	767.3	15	— 9.4	.....	N	1	0.4	.....	.....	8s	.....	N	0.01	0.3	Light snow..	W. R. Bigg.
*Chatham, N. B	.....	.....	29.71	754.6	24	— 4.4	96	N	1	0.4	.....	.....	10s	.....	.....	0.05	1.3	Light snow..	G. A. Blair.
Charlottetown, P. E. Island	.....	.....	29.69	754.1	25	— 3.9	94	NW	5	2.2	.....	.....	10n	.....	.....	Inap.	Inap.	Cloudy	H. J. Cundall, C. E.
Cornwall, Ontario	.....	.....	30.16	766.1	13.9	—10.1	91	NW	.....	.....	1	0	1s	.....	.....	0	0	Fair	James Smith, M. A.
Dalhousie, N. B	.....	.....	29.91	759.7	24.0	— 4.4	93	W	.....	.....	1	.....	.....	.....	.....	0.10	2.5	Overcast.....	H. A. Johnson.
Esquimault, B. C	.....	.....	29.91	759.7	40.1	4.5	100	NE	.....	.....	.....	.....	10n	.....	.....	0.25	6.3	Rainy.....	W. H. Bevis.
*Father Point, Quebec	.....	.....	29.84	757.9	22	— 5.6	93	N	12	5.4	.....	.....	10n	.....	.....	0.01	0.3	Light snow..	J. McWilliams.
Fredericton, N. B	.....	.....	29.76	755.9	26.0	— 3.3	88	W	2	0.9	.....	.....	10s	.....	.....	0.05	1.3	Cloudy.....	Prof. Harrison.
*Fort Garry, Manitoba	.....	.....	30.28	769.1	10	—12.2	96	SW	5	2.2	.....	Haze	2ks	W	W	0	0	Fair	James Stewart.
Goderich, Ontario	.....	.....	30.28	769.1	17.0	— 8.3	93	Calm	.....	.....	0	4c	8s	W	.....	0	0	Clearing.....	H. J. Strang, M. A.
Granton, Ontario	29.05	737.9	30.25	768.3	10.6	—11.9	.....	Calm	.....	.....	0	0	0	.....	.....	0	0	Clear	James Grant.
*Halifax, N. S	.....	.....	29.66	753.4	30	— 1.1	92	NW	4	1.8	.....	.....	10n	.....	.....	0.020	0.51	Cloudy.....	F. Allison, M. A.
Hamilton, Ontario	.....	.....	30.29	769.4	17.2	— 8.2	75	W	.....	.....	1	10c	0	.....	.....	0	0	Clear ?.....	G. Dickson.
Heart's Content, N. F	.....	.....	29.39	746.5	33	0.6	100	SW	.....	.....	3	.....	10	.....	.....	0.11	2.8	Overcast.....	E. Weedon.
*Kingston, Ontario	.....	.....	30.25	768.3	13	—10.6	92	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	S. Woods, M. A.
*Montreal, Quebec	.....	.....	30.10	764.5	15	— 9.4	78	W	18	8.0	.....	0	0	.....	.....	Inap.	Inap.	Clear.....	C. H. McLeod, C. E.
*Ottawa, Ontario	.....	.....	30.20	767.1	15	— 9.4	82	W	10	4.5	.....	2cs	0	W	.....	0	0	Clear.....	J. B. Haney.
*Parry Sound, Ontario	.....	.....	30.30	769.6	0	—17.8	62	N	1	0.4	.....	0	0	.....	.....	0	0	Clear	Rev. R. Mosley.
Port Dover, Ontario	.....	.....	30.27	768.8	18	— 7.8	84	NW	5	2.2	.....	10ck	0	NW	.....	0	0	Fair.....	H. Morgan.
Port Hastings, N. S	.....	.....	29.65	753.1	24.9	— 3.9	.....	NW	5	2.2	.....	.....	.....	.....	.....	0	0	Fine.....	Peter Grant.
Port Stanley, Ontario	.....	.....	30.27	768.8	14	—10.0	90	N	1	0.4	.....	5k	0	W	.....	0	0	Fair	M. Payne.
*Quebec, Quebec	.....	.....	29.96	761.0	18	— 7.8	84	SW	6	2.7	.....	0	0	.....	.....	0.16	4.1	Clear	Capt. Ashe, R. N.
*Rockliffe, Ontario	.....	.....	30.26	768.6	6	—14.4	95	SE	4	1.8	.....	.....	5s	.....	SE	0	0	Fair	
St. John, N. B	.....	.....	29.76	755.9	29	— 1.7	94	N	1	0.4	.....	10c ?	0	.....	.....	0	0	Overcast.....	G. Murdoch, C. E.
*Saugeen, Ontario	.....	.....	30.26	768.6	8	—13.3	78	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	K. Stewart.
Stayner, Ontario	.....	.....	30.31	769.9	6	—14.4	86	N	1	0.4	.....	0	0	.....	.....	0	0	Clear	R. J. Cole.
Stratford, Ontario	28.86	733.0	30.29	769.4	5.2	—14.9	98	Calm	0	0	.....	2ck	2s	W	.....	0	0	Fair.....	C. J. MacGregor, M. A.
*Sydney, C. B	.....	.....	29.6:	752.1	25	— 3.9	82	NW	5	2.2	.....	.....	10s	.....	NW	0	0	Cloudy.....	T. C. Hill.
*Toronto, Ontario	.....	.....	30.27	768.8	13	—10.6	83	NW	8	3.6	.....	2cs	0	W	.....	0	0	Clear.....	Magnetic Observatory.
Woodstock, Ontario	.....	.....	30.30	769.6	10.7	—11.8	90	Calm	0	0	.....	3c	3s	.....	.....	0	0	Fair.....	J. Montgomery.
SUB-SERIES.																			
St. Johns, Newfoundland	.....	.....	29.48	748.8	34.5	1.4	90	Calm	.....	.....	.....	10k	10s	.....	.....	0.25	6.3	Fair.....	John Delany.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—The originals for Brockville, Charlottetown, Port Dover, Port Stanley, Stayner, St. Johns, N. F. and those telegraphed, give the amount of cloudiness by the scale 0 to 4. The elevation of Granton is 1,015 feet, or 309.4 m.; Stratford, 1,182 feet, or 360.3 m

UNITED STATES SERIES.

Furnished by the coöperation of Bvt. Brig. Gen. Albert J. Myer, Chief Signal Officer, U. S. Army.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'r 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain fall or melted snow in the past 24 hours. Inches.	Rain fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Albany, N. Y.	.....	.....	30.04	763.0	24	— 4.4	88	NW	25	11.2	.....	0	0	.....	.....	Inap.	Inap.	Clear	
Alpena, Mich.	.....	.....	30.25	768.3	15	— 9.4	65	NW	2	0.9	.....	0	2s	.....	NW	0	0	Fair	
Atlantic City, N. J.	.....	.....	30.08	764.0	30	— 1.1	78	N	8	3.6	.....	2c	Haze	W	.....	0	0	Fair	
Augusta, Ga.	.....	.....	30.05	763 3	40	4.4	91	NW	5	2.2	.....	.....	Fog	.....	.....	0	0	Foggy	
Baltimore, Md.	.....	.....	30.15	765.8	35	1.7	80	Calm	0	0	.....	5c	Sm'c	.....	.....	0	0	Smoky	
Barnegat, N. J.	.....	.....	30.07	763.8	33	0.6	64	N	11	4.9	.....	2c	0	SW	.....	0	0	Clear	
Bismarck, Dakota	28.42	721.9	30.25	768.3	7	—13.9	65	NW	1	0.4	.....	0	0	.....	.....	0	0	Clear	
Boston, Mass.	.....	.....	29.93	760.2	31	— 0.6	60	W	16	7.2	.....	0	0	.....	.....	0	0	Clear	
Breckenridge, Minn.	.....	.....	30.44	773.2	1	—17.2	71	W	2	0.9	.....	0	0	.....	.....	0	0	Clear	
Buffalo, N. Y.	.....	.....	30.23	767.8	21.0	— 6.1	85	Calm	0	0	.....	2c	0	.....	.....	Inap.	Inap.	Fair	
Burlington, Vt.	.....	.....	30.13	765.3	21	— 6.1	71	NW	6	2.7	.....	0	8s	.....	.....	0.02	0.5	Cloudy	
Cairo, Ill.	.....	.....	30.10	764.5	35	1.7	80	N	4	1.8	.....	0	Fog	.....	.....	0	0	Clear	
Cape Hatteras, N. C.	.....	.....	29.96	761.0	44	6.7	84	NE	24	10.7	.....	10cs	Sm'c	.....	.....	0	0	Cloudy	
Cape Henry, Va.	.....	.....	30.10	764.5	39	3.9	73	N	11	4.9	.....	5c	0	SW	.....	0	0	Fair	
Cape Lookout, N. C.	.....	.....	30.01	762.2	46	7.8	76	NE	16	7.2	.....	0	5s	.....	NE	0	0	Fair	
Cape May, N. J.	.....	.....	30.07	763.8	35	1.7	80	NW	22	9.8	.....	2c	0	W	.....	0	0	Fair	
Charleston, S. C.	.....	.....	30.00	762.0	50	10.0	78	N	8	3.6	.....	0	Sm'c	.....	.....	0.32	8.1	Clear	
Cheyenne, Wyoming	24.17	613.9	30.11	764.8	18	— 7.8	100	SW	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Chicago, Ill.	.....	.....	30.18	766.6	35	1.7	80	N	4	1.8	.....	2c	5s	W	.....	0	0	Fair	
Cincinnati, Ohio	.....	.....	30.10	764.5	37	2.8	71	E	4	1.8	.....	2ck	Sm'c	W	.....	0	0	Fair	
Cleveland, Ohio	.....	.....	30.26	768.6	25	— 3.9	88	N	2	0.9	.....	.....	10s	.....	N	0	0	Cloudy	
Corsicana, Tex.	.....	.....	30.14	765.5	42	5.6	91	NW	6	2.7	.....	0	0	.....	.....	0	0	Clear	
Davenport, Iowa	.....	.....	30.23	767.8	36	2.2	80	Calm	0	0	.....	3k	7s	E	.....	0	0	Cloudy	
Denison, Tex.	.....	.....	30.16	766.1	45	7.2	92	NW	10	4.5	.....	.....	10s	.....	N	0.27	6.9	Cloudy	
Denver, Col.	25.00	635.0	30.22	767.6	25	— 3.9	75	SE	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Detroit, Mich.	.....	.....	30.23	767.8	31	— 0.6	79	NE	1	0.4	.....	10cs	0	.....	.....	0	0	Cloudy	
Dodge City, Kan.	27.67	700.3	29.97	761.2	31	— 0.6	89	N	36	16.1	.....	.....	10n	.....	.....	0.08	2.0	Light snow	
Dubuque, Iowa	.....	.....	30.23	767.8	29	— 1.7	89	Calm	0	0	.....	5cs	0	.....	.....	0	0	Fair	
Duluth, Minn.	.....	.....	30.27	768.8	24	— 4.4	74	NW	24	10.7	.....	0	0	.....	.....	0	0	Clear	
Eastport, Me.	.....	.....	29.74	755.4	32	0.0	79	NW	6	2 7	.....	.....	10s	.....	.....	Inap.	Inap.	Cloudy	
Erie, Pa.	.....	.....	30.20	767.1	21	— 6.1	85	Calm	0	0	.....	4c	Haz	.....	.....	0	0	Fair	
Escanaba, Mich.	.....	.....	30.16	766.1	30	— 1.1	78	SW	6	2.7	.....	.....	10s	.....	.....	0	0	Cloudy	
Fort Gibson, Indian Ter.	.....	.....	30.11	764.8	45	7.2	92	NW	8	3.6	.....	.....	10ks	.....	N	0.28	7.1	Cloudy	
Ft. St. Michael, Alaska	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Fort Sill, Indian Ter.	28.96	735.6	30.10	764.5	42	5.6	56	NW	8	3.6	.....	5ck	2s	N	.....	0.36	9.1	Fair	
Fort Sully, Dakota	28.63	727.2	30.43	772.9	21	— 6.1	85	NW	2	0.9	.....	0	0	.....	.....	0	0	Clear	
Florence, Arizona	28.46	722.9	29.99	761.7	50	10.0	.....	NW	.....	.....	.....	0	0	.....	.....	0	0	Clear	
Galveston, Tex.	.....	.....	30.10	764.5	55	12.8	87	NW	12	5 4	.....	2cs	0	.....	.....	0	0	Fair	
Grand Haven, Mich.	.....	.....	30.21	767.3	27	— 2.8	83	E	7	3.1	.....	.....	10s	.....	W	0	0	Cloudy	
Indianapolis, Ind.	.....	.....	30.15	765.8	35	1.7	85	NE	1	0.4	.....	0	5s sm'c	.....	.....	0	0	Fair	
Indianola, Tex.	.....	.....	30.13	765.3	54	12.2	86	NW	7	3.1	.....	0	5s	.....	.....	0.01	0.3	Fair	
Jacksonville, Fla.	.....	.....	29.96	761.0	53	11.7	86	NW	5	2.2	.....	8ck	0	NE	.....	0.59	15.0	Cloudy	
Keokuk, Iowa	.....	.....	30.16	766.1	37	2.8	80	W	4	1.8	.....	.....	10s	.....	W	0	0	Cloudy	
Key West, Fla.	.....	.....	29.97	761.2	68	20.0	84	NW	8	3.6	.....	0	5ks	.....	.....	0.05	1.3	Fair	
Kittyhawk, N. C.	.....	.....	30.06	763.5	41	5.0	73	NE	30	13.4	.....	10cs	0	.....	.....	0	0	Cloudy	
Knoxville, Tenn.	.....	.....	30.09	764.3	32	0.0	70	N	4	1.8	.....	2c	Fog	W	.....	0	0	Fair	
La Crosse, Wis.	.....	.....	30.23	767.8	29	— 1.7	78	S	2	0.9	.....	.....	10s	.....	.....	0	0	Cloudy	
Leavenworth, Kan.	.....	.....	30.20	767.1	36	2.2	90	N	7	3.1	.....	.....	10s	.....	N	0.22	5.6	Cloudy	
Louisville, Ky.	.....	.....	30.14	765.5	35	1.7	80	N	2	0.9	.....	0	0	.....	.....	0	0	Clear	
Lynchburg, Va.	.....	.....	30.14	765.5	33	0.6	84	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Malone, N. Y.	.....	.....	30.08	764.0	16	— 8.9	83	NW	10	4.5	.....	.....	10s	.....	NW	0.05	1.3	Cloudy	
Marquette, Mich.	.....	.....	30.13	765.3	31	— 0.6	78	W	10	4.5	.....	.....	10s	.....	.....	0	0	Cloudy	
Memphis, Tenn.	.....	.....	30.08	764.0	37	2.8	90	N	2	0.9	.....	5c	Sm'c	SW	N	0	0	Fair	
Milwaukee, Wis.	.....	.....	30.24	768.1	26	— 3.3	88	Calm	0	0	.....	8c	Fog	.....	.....	0	0	Cloudy	
Mobile Ala.	.....	.....	30.05	763.3	51	10.6	93	N	4	1.8	.....	5c	5s	.....	.....	0	0	Cloudy	
Montgomery, Ala.	.....	.....	30.08	764.0	45.5	7.5	83	NE	1	0.4	.....	10c	Fog	.....	.....	0	0	Cloudy	
Morgantown, W. Va.	29.10	739.1	30.21	767.3	33	0.6	84	N	1	0.4	.....	10ck	Fog	.....	.....	0	0	Cloudy	
Mt. Washington, N. H.	23.34	592.8	29.70	754.4	4	—15.6	100	NW	48	21.5	.....	.....	Fog	.....	.....	0	0	Foggy	
Nashville, Tenn.	.....	.....	30.05	763.3	36	2.2	90	Calm	0	0	.....	0	Fog	.....	.....	0	0	Clear	
New Haven, Conn.	.....	.....	30.07	763.8	35	1.7	61	N	8	3.6	.....	0	0	.....	.....	0	0	Clear	
New London, Conn.	.....	.....	29.99	761.7	34	1.1	51	W	8	3.6	.....	0	0	.....	.....	0	0	Clear	
New Orleans, La.	.....	.....	30.04	763.0	53	11.7	86	NW	3	1.3	.....	9ck	Fog	.....	.....	0	0	Cloudy	
Newport, R. I.	.....	.....	29.96	761.0	34	1.1	69	W	10	4.5	.....	0	0	.....	.....	0	0	Clear	
New York, N. Y.	.....	.....	30.10	764.5	32	0 0	60	NW	10	4.5	.....	0	Sm'c	.....	.....	0	0	Clear	
Norfolk, Va.	.....	.....	30.11	764.8	39	3.9	63	NE	12	5.4	.....	8c	0	W	.....	0	0	Fair	
North Platte, Neb.	27.39	695.7	30.18	766.6	21	— 6.1	85	NW	6	2.7	.....	0	0	.....	.....	0	0	Clear	
Omaha, Neb.	29.13	739.9	30.27	768.8	32	0.0	69	N	13	5.8	.....	.....	10s	.....	.....	0.26	6.6	Cloudy	
Oswego, N. Y.	.....	.....	30.22	767.6	21.5	— 5.8	85	N	4	1.8	.....	Haz	2.8	.....	NE	Inap.	Inap.	Fair	
Pembina, Dakota	.....	.....	30.32	770.1	12	—11.1	90	W	7	3.1	.....	0	2s	.....	.....	0	0	Clear	
Philadelphia, Pa.	.....	.....	30.10	764.5	33	0.6	55	NE	21	9.4	.....	2c	0	NW	.....	0	0	Fair	
Pike's Peak, Col.	17.64	448.0	29.85	758.2	— 6.6	—21.4	60	N	8	3.6	.....	0	5s	.....	.....	0	0	Fair	
Pittsburgh, Pa.	.....	.....	30.18	766.6	31	— 0.6	79	N	2	0.9	.....	5c	0	NW	.....	0	0	Fair	
Port Huron, Mich.	.....	.....	30.22	767.6	23	— 5.0	86	NW	2	0.9	.....	5cs	Haz	W	.....	0	0	Hazy	
Portland, Me.	.....	.....	29.87	758.7	32	0.0	61	NW	5	2.2	.....	0	Haz	.....	.....	0	0	Clear	
Portland, Oregon	.....	.....	29.99	761.7	41	5.0	91	Calm	0	0	.....	.....	10ks	.....	.....	0	0	Cloudy	
Punta Rassa, Fla.	.....	.....	29.97	761.2	62.5	16.9	88	N	16	7.2	.....	.....	10s	.....	N	0.04	1.0	Cloudy	
Rochester, N. Y.	.....	.....	30.21	767.3	19	— 7.2	76	W	3	1.3	.....	Haze	Sm'c	.....	.....	Inap.	Inap.	Clear	
Salt Lake City, Utah	25.88	657.3	30.21	767.3	19	— 7.2	84	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Sandy Hook, N. J.	.....	.....	30.04	763.0	33	0.6	61	NW	18	8.0	.....	0	0	.....	.....	0	0	Clear	
San Diego, Cal.	.....	.....	30.01	762.2	51	10.6	32	NE	4	1.8	.....	0	0	.....	.....	0	0	Clear	
San Francisco, Cal.	.....	.....	30.00	763.5	50	10.0	86	NW	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Santa Fé, N. M.	23.35	593.1	29.89	759.2	19	— 7.2	70	NE	1	0.4	.....	0	0	.....	.....	0	0	Clear	
Savannah, Ga.	.....	.....	30.00	762.0	48	8.9	85	N	10	4.5	.....	2c	Sm'c	SW	.....	0.25	6.3	Clear	
Shreveport, La.	.....	.....	30.11	764.8	47	8.3	85	W	3	1.3	.....	.....	10s	.....	W	0	0	Cloudy	
Smithville, N. C.	.....	.....	30.00	762.0	48	8.9	77	N	11	4.9	.....	8c	0	SW	.....	0	0	Cloudy	
Springfield, Mass.	.....	.....	30.02	762.5	34	1.1	61	W	7	3.1	.....	0	0	.....	.....	0	0	Clear	
St. Louis, Mo.	.....	.....	30.12	765.0	37	2.8	81	NE	8	3.6	.....	0	2s,sm	.....	.....	0	0	Clear	
St. Marks, Fla.	.....	.....	30.04	763.0	48	8.9	92	N	4	1.8	.....	5cs	0	SW	.....	0.31	7.9	Fair	
St. Paul, Minn.	.....	.....	30.20	769.4	23	— 5.0	86	NW	8	3.6	.....	0	1s	.....	.....	0	0	Clear	
St. Paul's Island, Alaska	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Thatcher's Island, Mass.	.....	.....	29.92	760.0	31	— 0.6	60	NW	36	16.1	.....	0	0	.....	.....	0	0	Clear	
Toledo, Ohio	.....	.....	30.23	767.8	30	— 1.1	78	E	3	1.3	.....	5ck	0	SE	.....	0	0	Fair	
Tucson, Arizona	.....	.....	30.08	764.0	30	— 1.1	.....	SE	.....	.....	.....	0	0	.....	.....	0	0	Clear	
Tybee Island, Ga.	27.53	699.2	30.08	764.0	30	— 1.1	.....	.....	.....	.....	.....	2ck	Sm'c	.....	.....	0.15	3.8	Fair	
Vicksburg, Miss.	.....	.....	29.98	761.5	50	10.0	77	N	12	5.4	.....	5cs	Sm'c	S	S	0	0	Fair	
Virginia City, M. T.	24.33	618.0	30.10	764.5	46	7.8	76	Calm	0	0	.....	5cs	0	.....	.....	0	0	Clear	
Washington, D. C.	.....	.....	29.81	757.2	20	— 6.7	56	SE	1	0.4	.....	0	0	.....	.....	0	0	Fair	
Wilmington, N. C.	.....	.....	30.16	766.1	33	0.6	74	NW	6	2.7	.....	1cs	Sm'c	SW	NW	0	0	Cloudy	
	.....	.....	30.02	762.5	46	7.8	76	NE	12	5.4	.....	8cs	Haze	SW	.....	0	0		

UNITED STATES SERIES.—CONTINUED.

STATIONS.	BAROMETER. Corrected for instrum'tal error and temperature. Inches.	BAROMETER. Corrected for instrum'tal error and temperature. Millimeters.	BAROMETER. Reduced to sea-level. Inches.	BAROMETER. Reduced to sea-level. Millimeters.	TEMPERATURE OF THE AIR. Fahrenheit.	TEMPERATURE OF THE AIR. Centigrade.	RELATIVE HUMIDITY. Per cent.	WIND. Direction. From—	WIND. Velocity. Miles per hour.	WIND. Velocity. Meters per second.	WIND. Force. 0—10.	CLOUDS. Amount. Up'er 0—10.	CLOUDS. Amount. Low'r 0—10.	CLOUDS. Direction. Upper. From—	CLOUDS. Direction. Lower. From—	RAIN-FALL OR MELTED SNOW IN THE PAST 24 HOURS. Inches.	RAIN-FALL OR MELTED SNOW IN THE PAST 24 HOURS. Millimeters.	WEATHER.	OBSERVER.
Wood's Holl, Mass.	.....	.....	29.97	761.2	34	1.1	79	NW	16	7.2	.....	0	0	.....	.....	0	0	Clear	
Yankton, Dakota	29.08	738.6	30.49	774.4	20	— 6.7	70	NW	15	6.7	.....	0	0	.....	.....	0	0	Clear	
Yuma, Arizona	.....	.....	30.03	762.7	60	10.0	.....	E	.....	.....	.....	0	0	.....	.....	0	0	Clear	
SUB-SERIES.																			
Kingston, Jamaica, W. I.	.....	.....	30.16	766.1	73	22.8	81	Calm	0	0	.....	2c	2s	SE	.....	0	0	.....	James Gall.
Navassa, W. I.	.....	.....	.....	.....	76	24.4	.....	E	.....	.....	3	.....	.....	.....	.....	0.07	1.8	.....	Dr. G. H. Davison.
Clifton, Ja., W. I.	27.17	690.1	29.98	761.5	60	15.6	88	.....	.....	.....	.....	.....	.....	.....	.....	0.22	5.6	.....	C. Partridge.
Paramaribo, D. Guiana, S.A	.....	.....	30.02	762.5	79	26.1	87	E	.....	.....	3	.....	7ks	.....	.....	0.07(	1 7!	½ cloudy.....	C. J. Hering.
Batavia, Dutch Guiana, S.A.	30.05	763.3	.....	.....	78.8	26	.....	E	.....	.....	.....	.....	.....	.....	.....	0.92(	23.5	½ cloudy	Dr. H. Groot.
Medellin, Colombia, S. A.	25.20	640.1	.....	.....	67.5	19.7	75	Calm	.....	.....	0	1cs	1ks	.....	.....	0.07	1.8	Fair	Thomas Herran.
York Factory, B. A.	.....	.....	29.87	758.7	6.0	—14.4	88	S	6	2.7	.....	.....	8s	.....	.....	0.01	0.3	Gloomy.....	J. Fortescue, W. Wood
Honolulu, Oahu, H. I.	.....	.....	30.13	765.3	71	21.7	95	NE	.....	.....	5	.....	.....	.....	.....	0.05	1.3	Drizzling.....	Daniel Smith.
Makawao, Maui, H. I.	.....	.....	30.00	762.0	60	15.6	87	E	.....	.....	1	0	8n	.....	.....	0.20	5.1	.....	F. L. Clarke.

NOTE.—The originals give the amount of cloudiness by the scale 0 to 4, except York Factory, Makawao, Medellin and Paramaribo. The elevation of the barometer at Bismarck is 1,677 feet, or 511.1 meters; Cheyenne, 6,057.3 ft., or 1,846.2 m.; Clifton, about 2,892 ft., or 881.5 m.; Denver, 5,135 ft., or 1,565.2 m.; Dodge City, 2486ft., or 757.5 m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Florence, 1,550 (?) ft., or 472.5 (?) m.; Makawao, 2,205 ft., or 672.1 m.; Morgantown, 1,027.9 ft., or 313.3 m.; Medellin, 4,876 ft., or 1,486.2 m.; Mt. Washington, 6,285 ft., or 1,915.6 m.; North Platte, 2,846 ft., or 867.4 m.; Omaha, 1,054.6 ft., or 321.4 m.; Pike's Peak, 14,160.7 ft., or 4,313.1 m.; Salt Lake City, 4,362.2 ft., or 1,329.6 m.; Santa Fé, 6,562.2 (?) ft., or 2,091.6 (?) m.; Tucson, 2,545 (?) ft., or 775.7 (?) m.; Virginia City, 5,480 (?) ft., or 1,670.3 (?) m.; Yankton, 1,278 ft., or 389.5 m. The following constants are added in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Denver, 5.22 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fé, 6.54 in.; Tucson, 2.59 in.; Virginia City, 5.48 in. The elevation of Batavia is about 6 feet; the barometric readings need the addition of 0.2 mm. or 0.01 in. for reduction to sea-level.

UNITED STATES NAVAL SERIES.

By authority of the **SECRETARY OF THE NAVY.**

Furnished by the coöperation of the Navy Department, through Commodore Daniel Ammen, U. S. N., Chief of Bureau of Navigation.

STATIONS AND VESSELS.	True course toward—	Hourly rate in knots.	*Barometer as reported.		Temperature of the Air.		Relative Humidity.	Wind.				Clouds.				Rain-fall or melted snow in the past 24 hours.		State of Ocean.	Direction of swell from—	Weather.	Observer.
								Direction.	Velocity		Force.	Amount.		Direction.							
												Up'er	Low'r	Up'er	Low'r						
			Inches.	Millimeters.	Fahrenheit.	Centigrade.	Per cent.	From—	Miles per hour.	Meters per second.	0—10.	0—10.	0—10.	From—	From—	Inches.	Millimeters.				
Naval Academy, Annapolis, Md.			29.77	756.1	31	— 0.6		NW			1		2		N	0	0			Clear.	
Naval Hospital, Annapolis, Md.			30.15	765.8	31	— 0.6	79	SW			1		1			0	0			Clear	
Navy Yard, Mare Island, Cal.			30.15	765.8	50	10.0	96	S			1		10			0	0			Foggy	
Navy Yard, Norfolk, Va.			30.18†	766.6†	40	4.4	82	N			5		4cs							‡D. clouds.	
Navy Yard, Pensacola, Fla.			30.10	764.5	59	15.0	94	NE			1		9		NE	0	0			‡D. clouds.	
Navy Yard, Portsmouth, N.H.			29.88	758.9	28	— 2.2		WNW			5		0							Clear.	
¶ Canonicus, New Orleans, La.			30.00	762.0	48	8.9	92	WNW			2		5		E					Cloudy	
Colorado, New York, N. Y.			30.21	767.3	33	0.6		NW			4–5		4		N	0	0			‡D. clouds.	
Essex, N. 34°, 20', W. 76°, 0'			29.96	761.0	59	15.0		NNE			4		10		S			Moderate.	NNE	Overcast.	
Hartford, Norfolk Va.			30.20	767.1	40	4.4		NNE			4		8		N	0	0			Pleasant.	
Lackawana, Mare Island, Cal.			30.21	767.3	52	11.1	86	Calm			0							Smooth		Foggy	
Marion, St. Georges Bay, Syria.			29.88	758.9	58	14.4	94	SW			3		7		N	Blank	Blank	Short, light.		‡D. clouds.	
Michigan, Erie, Pa.			30.10	764.5	18	— 7.8	84	Calm			0		2							Partly cl'dy.	
Monongahela, Baltimore, Md.			30.10	764.5	33	0.6		NNW			1–2		3		S&E					Foggy	
New Hampshire, Port Royal, S. C.			30.18	766.6	51	10.6		NNE			2		7		ESE	0.10	2.5	Smooth		‡D. clouds.	
Omaha, Panama.			30.03	762.7	75.5	24.2	93	W			1		8			0.01	0.3	Smooth		Pleasant.	
Ossipee, New Orleans, La.			30.07	763.8	53	11.7		SW			1		10		SW					Misty.	
Pensacola, Panama.			30.02	762.5	76	24.4	95	NNW			1		7		S					‡D. clouds.	
Plymouth, Pensacola, Fla.			30.05	763.3	62	16.7	83	NE			2		10					Smooth		Misty.	
¶ Rio Bravo, Matamoras, Mex.			30.02	762.5	57	13.9	94	NW			1		5		SW					‡D. clouds.	
Santee, Annapolis, Md.			29.72	754.9†	34	1.1		NW			1		2		N					Clear.	
St. Louis, League Island, Pa.			29.96	761.0	36	2.5		NW			6		5		SE	0	0			Fair	
Vandalia, Constantinople, Turkey.			29.83	757.7	44	6.7	92	SW			4		10		NE					‡D. clouds.	
Wabash, Boston, Mass.			30.00	762.0	33	0.6		NW			4		0							Blue sky.	
Wyoming, Washington, D.C.			30.13	765.†	42	5.5		W			1		2							Hazy.	

* It is not known that the barometer is corrected for temperature, instrumental error or elevation. † Aneroid Barometer. ‡ Detached clouds. ¶ Barometer corrected for instrumental error and reduced to sea-level.

UNITED STATES MARINE SERIES

REPORTED TO THE OFFICE OF THE CHIEF SIGNAL OFFICER OF THE ARMY.

NAMES OF VESSELS.	True course toward—	Hourly rate in knots.	Barometer reduced to sea-level.		Temperature of the Air.		Relative Humidity.	Wind.				Clouds.				State of Ocean.	Direction of swell from—	Weather.	Observer.
								Direction.	Velocity.		Force.	Amount.		Direction.					
												Up'er	Low'r	Upper.	Lower.				
			Inches.	Millimeters.	Fahrenheit.	Centigrade.	Per cent.	From—	Miles per hour.	Meters per second.	0—10.	0—10.	0—10.	From—	From—				
PACIFIC MAIL S. S. CO. MARINE SERIES. Furnished by the coöperation of ————, President; Williams, Blanchard & Co., Agents.																			
S. S. City of Peking																			Lt. Z. L. Tanner, U.S.N
OCCIDENTAL AND ORIENTAL S. S. CO. MARINE SERIES. Furnished by the coöperation of George H. Bradbury, President; T. H. Goodman, Agent.																			
S. S. Belgic																			Capt. John Metcalf.
S. S. Gaelic																			Capt. W. H. Kidley.
S. S. Oceanic																			Capt. H. Parsell.
NORTH GERMAN LLOYD OF BREMEN MARINE SERIES. Furnished by the coöperation of A. Schumacher & Co., Agents.																			
S. S. Baltimore																			Capt. H. Andressen.
S. S. Berlin																			Capt. C. Pohle.
S. S. Braunschweig																			Capt. K. Undütsch.
S. S. Nürnberg																			Capt. A. Jaeger.
S. S. Ohio																			Capt. G. Meyer.
MARINE SERIES. (Miscellaneous.) Furnished by the coöperation of Captain James Jorgensen.																			
Schooner Addie Fuller, at Brunswick, Ga.			29.96	759.4	58	14.4	64	NNE	8	3.6		5c	0					Clear	Capt. James Jorgensen

NOTE.—The schooner Addie Fuller gives the amount of cloudiness by the scale 0 to 4.

COLLATED AT THE OFFICE OF THE CHIEF SIGNAL OFFICER OF THE ARMY, WASHINGTON, D. C.

The records which appear in this Bulletin are copied from the regular exchanges of this office, made in each instance in compliance with an especial request and are published for the uses of the coöperating observers. The barometric readings in the first two columns are reduced to freezing and their respective standards; those in the second two also to mean sea-level. The "weather" is generally published as given.

When the distinction between the upper and lower strata of clouds is not reported, the *kinds* or *types*, viz: cirrus, cumulus, stratus, nimbus, scud, fracto, pallio, haze, fog and smoke, as indicated, respectively, by the letters c, k, s, n, d, f, p, hz., fg. and sm'e, are generally published with the amount in the lower-cloud column. The distinction between the upper and lower strata is carefully made in the United States Series and a portion of the Canadian Series, and the types are indicated by the above letters or their combinations in the proper column.

Albert J. Myer

Brig. Gen. (Brt. Asst.) Chief Signal Officer, U. S. A.

BULLETIN

OF

INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON FEBRUARY 9, 1877.

7:35 A. M. WASHINGTON mean time.

6:7 A. M. MEXICO mean time.
7:7 A. M. SAN JOSE mean time.
0:6 P. M. LISBON mean time.
0:28 P. M. MADRID mean time.
0:43 P. M. GREENWICH mean time.
0:53 P. M. PARIS mean time.
1:1 P. M. BRUSSELS mean time.
1:4 P. M. UTRECHT mean time.
1:13 P. M. BERNE mean time.

10:2 P. M. TOKEI mean time.

1:26 P. M. CHRISTIANIA mean time.
1:33 P. M. COPENHAGEN mean time.
1:33 P. M. ROME mean time.
1:37 P. M. BERLIN mean time.
1:49 P. M. VIENNA mean time.
1:55 P. M. STOCKHOLM mean time.
2:18 P. M. ATHENS mean time.
2:30 P. M. CONSTANTINOPLE mean time.
2:44 P. M. ST. PETERSBURG mean time.

ALGERIAN SERIES.

Furnished by the coöperation of General d'Endeville, Commandant Supérieur du Génie in Algeria.

STATIONS.	Barometer, corrected for instrum'tal error and temperature.		Barometer, reduced to sea-level.		Temperature of the Air.		Relative Humidity.	Wind. Direction.	Wind. Velocity.		Wind. Force.	Clouds. Amount.		Clouds. Direction.		Rain-fall or melted snow in the past 24 hours.		Weather.	Observer.
	Inches.	Millimeters.	Inches.	Millimeters.	Fahrenheit.	Centigrade.	Per cent.	From—	Miles per hour.	Meters per second.	0—10.	Up'er 0—10.	Low'r 0—10.	Upper. From—	Lower. From—	Inches.	Millimeters.		
Nemours			30.36	771.2	62.8	17.1		SSE			2		1			0	0	Clear	Michel.
Algiers			30.31	769.9	63.3	17.4		SW			1		0			0	0	Clear	Biscarrat.
La Calle			30.20	768.7	57.2	14.0		NW			3		2			0	0	Clear	Fleury.
Tunis			30.23	767.8	59.0	15.0		NW			2		2			0.008	0 2	Clear	Jacques.
Sfax																			
Saida																			
Tebessa			30.32	770.2	59.0	15.0		S			1		2			0	0	Clear	Millot.
Geriville			30.27	768.8	44.6	7.0		NW			3		2			0	0	Clear	Bourgeois.
Laghouat			30.23	767.9	44.6	7.0		N			3		1			0	0	Clear	Lemaillot.
Biskra			30.25	768.4	55.4	13.0		E			2		1			0	0	Clear	Guyot.
			30.31	769.8	63.0	17.2		NW			2		0			0	0	Clear	Kuntz.

NOTE.—In the originals the distinction between the amount of upper and lower clouds is apparently not made. The weather is published as given. The rain-fall is measured at 7 a. m., local time.

AUSTRIAN SERIES.

Furnished by the cooperation of Professor Ferdinand Osnaghi, Director of the Imperial and Royal Central Meteorological Institute at Vienna.

Agram			29.98	761.4	52.3	11.3	57	SW			2		3			0	0		Prof. Ivan Stozir.
Cracow, I. R. Observatory			29.78	756.3	39.6	4.2	74	W			3		10			0.130	3.3		Dr. Wierzbiski.
Eperies			29.79	756.7	38.5	3.6	80	Calm			0		10			0	0		Julius Mikolik.
Gratz	28.60	727.0	29.92	760.0	48.4	9.1	67	SSW			2		2			0	0		Andreas Rospini.
Hermannstadt	28.45	722.5	29.91	759.6	40.5	4.7	69	NW			5		6			0	0		Prof. Reissenberger
Kremsmünster	28.65	727.6	30.03	762.7	39.6	4.2	90	W			4		10			0.630	16.0		Prof. C. Wagner.
Lemberg			29.70	754.3	35.2	1.8	85	NW			3		10			0.146	3.7		Dr. T. Stanecki.
Nyiregyhaza																			Habzsuda Daniel.
Pola			30.08	764.0	51.4	10.8	81	SW			1		7cks			0	0		I.R. Hydrographic Office.
Szegedin			29.95	760.7	47.5	8.6	78	W			1		6			0	0		Karl Stancel.
Trieste			30.10	764.5	51.8	11 0	75	Calm			0		10			0	0	Cloudy	Prof. V. Farolfi.
Vienna			29.89	759.2	47.7	8.7	59	WNW			4		4			0	0		I. R. Central Met. Obs'y.

NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 7 p. m., local time. The elevation of Gratz is 343.5 meters, or 1,126.9 feet; Hermannstadt, 407.8 meters, or 1,337.9 feet; Kremsmünster, 383.6 meters, or 1,258.5 feet.

BELGIAN SERIES.

Furnished by the coöperation of J. C. Houzeau, Director of the Royal Observatory at Brussels.

Arlon			30.15	765.8	43.3	6.3	83	W			2		7			0.173	4.4		
Brussels			30.10	764.4	45.5	7.6	65	W			2	..ck	9k	WNW	NNW	0.045	1.15		Royal Observatory.
Furnes			30.09	764.3	47.1	8.4	77	SW			4		5			0.016	0.4		
Maeseyck			30.07	763 8	45.0	7.2	69	W			6		10			0.075	1.9		

NOTE.—In the originals, the weather is occasionally given in general notes.

BRITISH SERIES

Furnished by the coöperation of Robert H. Scott, Esq., Director of the Meteorological Office, London, Alexander Buchan, Secretary of the Scottish Meteorological Society, Edinburgh, and the respective Observers.

STATIONS.	Barometer. Corrected for instrumental error and temperature. Inches.	Barometer. Corrected for instrumental error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Upper. 0—10.	Clouds. Amount. Lower. 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Aberdeen			29.79	756.7	43.0	6.1		W	14	6.3			6			0	0	*D. clouds	William Boswell.
Ardrossan			29.88	758.9	45	7.2		WSW			3		8					Raining	William McNeil.
Armagh, Observatory			29.94	760.5	45.0	7.2		SSW	15	6.7			10					Gloomy	S. Call, for Dr. Robinson.
Bidston (Liverpool Obs.)			30.00	762.0	43.8	6.6		WSW	9	4.0			10					Raining	John Hartnup.
Birr Castle, (Parsonstown)			30.03	762.7	50.6	10.3		WSW			1		10					Drizzling	J. Dreyer.
Bradford			29.96	761.0	46.4	8.0		W			1		2			0	0	*D. clouds	J. McLandsborough.
Bridgetown, (Barbados)			30.03	762.7	80.0	26.7		NE			2		5					*D. clouds	Sergt. J. F. Halanen, A.
Cambridge, Observatory			30.03	762.7	47.0	8.3		WSW			1		10					Overcast	H. Todd. [H.C.
Cardington			30.04	763.0	47.0	8.3		W			1		9					Overcast	John McLaren.
Carlisle																			T. Bell, for J. Cartmell.
Chatham, School M. E.			30.03	764.3	49.2	9.6		Calm			0		6					Gloomy	Capt. Fellows, R. E.
Dartmoor	28.72	729.5	30.26	768.6	45.6	7.6		W			6		10					Threatening	R. E. Power.
Davos Platz, (Switzerland)	24.92	633.0			35.2	1.8	71	SE			1		10			0.099	2.51	Overcast	Francis Redford, M. A.
Donaghadee			29.89	759.2	47	8.3		WSW			3		10					Overcast	J. Mac Gowan.
Dover			30.07	763.8	47	8.3		WSW			2		3					¼ clouded	J. Costello.
Eccles, (near Manchester)			29.99	761.7	43.7	6.5		SW	1.8	0.8			10					Drizzling	Thomas Mackereth.
Falmouth, Observatory			30.23	767.8	52.6	11.4		W			5		6					Overcast	The Staff.
Fort Napier, (Natal)	27.57	700.3	29.80	756.9	76.0	24.4		E			2		1					Blue sky	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.94	760.5	86	30.0		N			0		3					*D. clouds	
Galway, Queen's College			30.07	763.8	47	8.3		W			2		3					*D. clouds	Prof. A. H. Curtis.
Gibraltar, (Mediterranean)			30.31	769.9	69.8	21.0		W			2		1					Blue sky	Corpl. C. Aitken, A. H. C.
Glasgow, Observatory			29.84	757.9	44.6	7.0		SW			1		10					Overcast	Lewis Stuart.
Great Yarmouth			30.00	762.0	45	7.2		W			2		5					Hazy	G. T. Watson.
Greenwich, Royal Obs'y			30.06	763.5	48.4	9.1		W			2		10					Overcast	The Staff, for G. B. Airy.
Guernsey			30.23	767.8	53	11.7		WSW			4		4					*D. clouds	Dr. S. E. Hoskins.
Helston			30.28	769.1	52	11.1		SW			6		6c			0	0	Fair	M. P. Moyle.
Holyhead			29.99	761.7	48	8.9		SW			3		10					Overcast	John Tilston.
Kew, Observatory			30.06	763.5	49.8	9.9		WSW	8	3.6			9					*D. clouds	The Staff.
Kingstown			30.01	762.2	52	11.1		W			3		10					Overcast	George Mitchell.
Leicester Museum			30.01	762.2	46.1	7.8		SW			1		10					Overcast	Wm. J. Harrison, F.G.S.
Malta, (Mediterranean)			30.06	763.5	57.8	14.3		NW			2		10					Overcast	Corp'l. P. Bravis, A.H.C.
Nairn			29.73	755.1	42	5.6		SW			1		8					¾ clouded	W. D. Penny.
Nassau, (Bahamas)			29.95	760.7	71.0	21.7		W			2		8					Showery	Surg. Maj. Henry.
Nottingham, Observatory			30.00	762.0	48.0	8.9		SW			3		7ck,k		WSW	0.020	0.51	*D. clouds	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			30.00	762.0	45.2	7.3		SW			1		10					Foggy	Rev. Stephen Whitty.
Oxford, Radcliffe Obs'y			30.05	763.3	52	11.1		W			2		9					Overcast	J. Lucas.
Plymouth			30.21	767.3	53.5	11.9		W			4		10					Overcast	John Merrifield.
Roche's Point			30.12	765.0	53	11.7		W			4		8					Dull	W. Kennedy.
Saint Ann's Head			30.09	764.3	50	10.0		W			6		10					Foggy	John C. Walker.
Saint Helier, (Jersey)			30.25	768.3	54.2	12.3		W			4		2					¾ clouded	A. P. Amy.
Sandwick Manse, (Orkneys)			29.72	754.9	37	2.8		WNW	15	6.7			3					Showery	Rev. C. Clouston, LL. D.
Scarborough																			F. Shaw.
Scutari Cemetery, (Turkey)			30.04	763.0	47.0	8.3		S			1		2					*D. clouds	Sergt. W. H. Lyne.
Sheffield			30.03	762.7	43.2	6.2		WSW			2		6			0.042	1.06	*D. clouds	W. F. Cooper.
Silloth Rectory			29.92	760.0	44.3	6.8	93	SW			2		10			0.070	1.78	Overcast	Rev. Francis Redford
Stonyhurst, Observatory			29.97	761.2	45.6	7.2		W			2		9					Blue sky	Rev. S. J. Perry.
Stornoway, Lewis C., (Hebr.)			29.79	756.7	40	4.4		W			2		10					Drizzling	John Smith.
Stratfield Turgiss			30.09	764.3	51.2	10.7		SW			1		10					Overcast	Rev. Charles H. Griffith.
Thurso			29.70	754.4	41	5.0		NW			2		8					Overcast	John Trotter.
Truro, Royal Institution			30.22	767.6	55	12.8		W			6		8					Gloomy	W. Newcombe.
Valencia, Observatory			30.11	764.8	51.7	10.9		WSW	33	14.8			10					Squally	The Staff.
SUB-SERIES.																			
Calf of Man, (Isle of Man)																			Henry Mercer.
Cape Good Hope, Obs'y			29.94	760.5	81.8	27.7	44	SSE	20	8.9		0	0						The Staff, for E. J. Stone.
Hobart Town, (Tasmania)			29.83	757.7	75.0	23.9	79	NE			1		6k			0	0	Hazy	Francis Abbott, F.R.A.S.
Leith, Restalrig Park			29.85	758.2	46.0	7.8		W			3		10k			0	0	Overcast	Andrew Gibb.
Mauritius, Observatory			29.62	752.3				NE	23.4	10.5						1.41	35.8		C. Meldrum.
Melbourne, Observatory			29.96	761.0	77.9	25.5	56	NE	3	1.3			7			0	0	Dull	R. L. J. Ellery.
Monach L't-house, (Hebrides)																			J. Youngclause.
North Unst, (Shetland Is.)			29.61	752.1	37	2.8		NW			4	7	5	NW					Robert Burnet.

NOTE.—Generally, the originals do not give the relative humidity, rain-fall, or distinction between upper and lower clouds. The originals give the wind direction to 32 points and weather by the Beaufort notation. The originals give the barometer for Aberdeen, Cardington, Freetown, Galway, Oxford, St. Helier, Sandwick, Scarborough, Stonyhurst, Leith, Monach and North Unst as read off and the amount of cloudiness for Stornoway by the scale 0 to 4. The wind-force is given by the scale 0 to 12 in the official series; 0 to 6 in the sub-series; except in lbs. per square foot for Greenwich and Hobart Town. The rain-fall is measured at Aberdeen at 10 a. m.; Bradford, 9 a. m.; Hobart Town, 7:30 a. m.; Nottingham, 6 p. m.; Mauritius, 9 a. m., local time. The elevation of Dartmoor is 1,400 feet, or 426.7 meters; Davos Platz, 5,107.2 feet, or 1,556.02 meters; Fort Napier, 2,200 feet, or 670.6 meters. *Detached cloud.

COSTA RICA SERIES.

By authority of the Minister of Foreign Affairs.

Furnished by the coöperation of Senor Federico Maison, Director of the Central Office of Statistics and Meteorology.

San José																			

DANISH SERIES.

Furnished by the coöperation of Captain N. Hoffmeyer, Director of the Royal Danish Meteorological Institute at Copenhagen.

Copenhagen			29.47	748.4	36.9	2.7	79	NW			4		10						
Faröe			29.66	753.3	39.0	3.9	84	W			4		1						
Godthaab, (Greenland)			29.72	754.8	3.9	—15.6	95	Calm			0		2						
Stykkisholm, (Iceland)			29.83	757.7	17.4	— 8.1	91	E			2		8						
Thorshavn, (Faröe)			29.71	754.7	32.7	0.4	73	N			2		7						
Vestervig			29.52	749.7	38.5	3.6	87	WNW			6		2						

NOTE.—The originals give the wind-force by the scale 0 to 6; occasionally, weather by Vienna symbols; no distinction between the amount of upper and lower clouds.

FRENCH SERIES.

Furnished by the coöperation of His Excellency, U. J. Le Verrier, Director of the Paris Observatory, and the respective Observers.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Alençon			30.29	769.3	48.2	9	84	W			1		8kn		W	0	0	Very cloudy	Normal School.
Amiens			30.21	767.3	47.5	8.6	84	SSE			2		5		SE	0.047	1.2	Cloudy	Normal School.
Avignon			30.24	768.2	60.4	15.8	52	N			3		0			0	0	Very clear	Normal School.
Bar-sur-Seine			30.23	767.7	51.1	10.6	79	N			4		8n		NW	0.244	6.2	Very cloudy	C. Saillard.
Beaumette, (near Angers)			30.31	769.9	54.0	12.2	76	W	4.0	1.8					W	0	0		Beaumette Observ'tory.
Beauvais			30.19	766.7	50.9	10.5	84	SW			3		10		WSW	0.030	0.75	Covered	Normal School.
Besançon			30.30	769.5	47.5	8.6	92	S			3		8		SW	0.283	7.2	Very cloudy	Normal School.
Bourg en Bresse			30.38	771.6	45.9	7.7	97	S			2		10n			0.106	2.7	Raining	Normal School.
Bourges			30.26	768.5	50.7	10.4	86	WNW			2		5		W	0.217	5.5	Cloudy	Normal School.
Brest			30.28	769.0	55.2	12.9	76	W			4		9		W	0.030	0.75		Naval Observatory.
Carcassonne			30.37	771.4	52.2	11.2	65	W			1		2		E	0	0	Slightly cl'dy	Normal School.
Caen																			Normal School.
Chartres			30.19	766.7	54.5	12.5	86	W			2		10		E	0.004	0.1	Covered	Normal School.
Châlons-sur-Marne			30.20	767.0	50.7	10.4	74	NW			3		8n		SE	0.071	1.8	Very cloudy	Normal School.
Clermont			30.30	769.7	53.6	12.0	61	NW			3		10		NW	0	0		Puy de Dome Obs'y.
Commercy			30.22	767.5	48.2	9	88	WNW			6		8kn		W	0.122	3.1	Very cloudy	Normal School.
Commune de Gréasque*			30.19	766.8	59.2	15.1	41	NW			4		2		NW	0	0		M. Kina.
Grenoble			30.32	770.1	47.3	8.5	70	NE			2		8ns		SW	0	0	Very cloudy	Normal School.
La Roche-sur-Yon			30.54	775.8	56.1	13.4	69	W			2		8		E	0	0	Very cloudy	Normal School.
Le Mans			30.31	769.9	51.3	10.7	85	W			4		8		W	0	0	Very cloudy	Normal School.
Lons-Le-Saulnier			30.30	769.6	48.4	9.1	92	S			1		5			0	0	Cloudy	Normal School.
Lorient			30.37	771.4	58.6	14.8	69	W			3		2		W	0.008	0.2	Slightly cl'dy	Naval Observatory.
Mâcon			30.44	773.2	47.1	8.4	94	Calm			0		10			0.059	1.5	Covered	Normal School.
Metz			30.22	767.5	44.6	7.0	87	WNW			2		10		WNW	0.087	2.2	Covered	M. Schuster.
Mirecourt			30.18	766.5	49.1	9.5	92	SSW			2		10		ESE	0.12	3.	Covered	Normal School.
Nismes			30.25	768.3	60.8	16	44	N			4	..c		NW		0	0		Normal School.
Orleans			30.23	767.8	50.0	10	89	W			4		8		W	0	0	Very cloudy	Normal School.
Paris, Observatory			30.26	768.6	50.4	10.2	86	WSW			2		10k		W	0.083	2.12	Covered	National Observatory.
Parthenay																			Normal School.
Privas			30.30	769.7	51.8	11	75	NNE			2		5		NNE	0	0	Cloudy	Normal School.
Rochefort, Observatory			30.41	772.4	54.5	12.5	89	WSW			3		10		NE	0	0	Covered	Naval Observatory.
Rouen			30.17	766.3	52.2	11.2	86	W			3		10		W	0.055	1.4	Covered	Normal School.
Saint Lo																			Normal School.
Tarbes	29.26	743.3	30.36	771.1	54.3	12.4	90	W			2		8		E	0	0	Very cloudy	Normal School.
Villefranche			30.53	775.5	53.1	11.7	96	NNW			3		8		W	0.055	1.4	Very cloudy	Normal School.
SUB-SERIES.																			
Fort de France, Martinique			29.89	759.1	77.0	25													L'Abbé Marchési.
Marseilles			30.14	765.5	61.5	16.4	66	NW			6		1			0	0	Partly cl'dy	Marseilles Observatory.
Mont-Louis	25.08	637.0	30.39	772.0	43.0	6.1	60	W	11.2	5.00			0			0	0		—. Falguère.
Montsouris, Paris			30.21	767.3	50.0	10.0	90	WSW			2		10		W	0.004	0.1		Montsouris Observatory
Perpignan			30.34	770.6	59.2	15.1	52	N	14.9	6.66			1		NW	0	0		Dr. Fines.
Pic du Midi, (Summit,) H. P.																			M. Baylac.
Pic du Midi, (Plantade,) H. P.	22.09	676.2			42.8	6.0		Calm			0		0			0	0	Clear	General de Nansouty.
Saint Maur, (near Paris)			30.22	767.5	49.8	9.9	91	WSW			1		10			0.205	5.2	Covered	E. Renou.
Toulouse			30.44	773.2	50.9	10.5	81	NW			2		5			0	0		Toulouse Observatory.
Tours			30.31	769.9	55.4	13.0	75	NNW			2		8		W	0.051	1.3		C. Marquet.
Versailles, (near Paris)			30.21	767.4	50.7	10.4	84	W			2		10			0.054	1.38	Rainy	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai)			30.13	765.2	38.3	3.5	92	NNE	7.4	3.33			10			0.346	8.8	Rain & snow	Marc Dechevrens, S. J.

NOTE.—Generally, the originals give the wind-force by the scale 0 to 7; no distinction between upper and lower clouds, and, in the official series, the amount by the scale 0 to 4 the rain-fall as measured at 7, 8 or 9 a. m., local time; at Clermont, 9 a. m. of the following day; the weather in general terms as published. The elevation of Clermont is 388 meters, or 1,272.9 feet; Commune de Gréasque, 322 meters, or 1,056.4 feet; Tarbes, 308 meters, or 1,010 feet; Mont-Louis, 1,586.40 meters, or 5,204.8 feet; Pic du Midi, (Summit,) 2,877 meters, or 9,439.1 feet; Pic du Midi, (Plantade,) 2,366 meters, or 7,762.6 feet. In correcting the Mont-Louis barometric observations for altitude, the constant 135. millimeters has been added. *Bouches-du-Rhône

GERMAN SERIES.

Furnished by the coöperation of Professor Dr. G. Neumayer, Director of the German Naval Observatory, Hamburg.

Bamberg			30.07	763.6	41.0	5.0	78	W			4		10	W		0.020	0.5		Prof. T. Hoh.
Berlin			29.72	754.9	44.2	6.8	74	SW			3		8			0.067	1.7		Prof. Arndt.
Breslau			29.75	755.7	39.7	4.3	74	W			6		10			0	0		Royal University Obs'y.
Carlsruhe			30.11	764.7	45.0	7.2	94	SW			5		10			0.118	3.0		A. Senz.
Cassel			29.98	761.4	42.8	6.0	65	W			5		8	W		0	0		Dr. H. Möhl.
Crefeld			30.01	762.3	45.5	7.5	70	W			4		8			0	0		Director Lose.
Emden			29.97	761.1	44.8	7.1	80	WNW			6		6			0	0		Prof. Prestel.
Frankfort on the Main			30.13	765.2	46.2	7.9	61	W			3		10			0	0		Physical Society.
Friedrichshafen	28.74	730.1	30.22	767.5	45.5	7.5	80	WSW			6		10			0.016	0.4	Raining	M. Wilhelm.
Hamburg			29.75	755.7	43.0	6.1	86	NW			7		9kn	NW		0.031	0.8	Hail-squall	Captain F. Hegemann.
Kiel			29.68	753.8	39.9	4.4	90	W			6		3			0.067	1.7		Prof. G. Karsten.
Königsberg, (Prussia)			29.34	745.3	34.0	1.0	84	W			7		5			0.114	2.9		Prof. E. Luther.
Köslin			29.49	749.1	37.4	3.0		W			7		10					Raining	H. Müller.
Leipsic			29.88	758.9	41.5	5.3	68	SW			5		10	W		0	0		Prof. Bruhns.
Memel			29.22	742.1	34.9	1.6	93	SW			3		10ks			0.079	2.0	Snowing	Reinbrecht & Skalweit.
Münster			29.92	760.0	44.6	7.0	82	SW			1		10			0	0		Prof. E. Heis.
Neufahrwasser			29.41	747.1	39.0	3.9	99	WNW			6		5			0.091	2.3		A Lothe.
Posen			29.61	752.1	39.4	4.1	86	WNW			8		10			0.043	1.1		Dr. Magener.
Strassburg, (in Alsace)			30.16	766.1	47.3	8.5	94	SW			3		10	SW		0.390	9.9	Raining	Dr. Schur.
Stuttgart			30.10	764.5	45.0	7.2	83	W			2		10			0.094	2.4	Raining	Prof. Schoder.
Thorn																			Dr. Hasenbalg.
Treves, (Trier)			30.04	763.1	48.0	8.9	77	NW			4		9			0.047	1.2	Foggy	Prof. Flesch.
Weissenburg, (Bavaria)	28.52	724.4	30.07	763.8	41.4	5.2	83	W			7		10			0.083	2.1		Dr. von Bebber.
Wustrow, Naval School			29.68	753.8	37.0	2.8	85	WNW			4		4			0	0		E. F. Schütz.
GERMAN NAVAL SERIES.																			

NOTE.—The elevation of Friedrichshafen is 413.4 meters, or 1,356.3 feet; Weissenburg, 431 meters, or 1,414.0 ft. In the originals the distinction between the amount of upper and lower clouds is not made. It is not always certain that the remarks in the weather column refer to the moment of observation.

GREEK SERIES.

Furnished by the coöperation of Professor Dr. J. F. Julius Schmidt, Director of the Royal Observatory at Athens.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Athens			30.09	764.3	57.7	14 3		NW										Partly clear	

Note.—The originals give the barometer corrected, but not reduced to sea-level; occasionally the kind of clouds; the weather as published. They omit the humidity, wind-force, amount of cloudiness and rain-fall.

ITALIAN SERIES.

Furnished by the cooperation of His Excellency the Minister of Agriculture, Industry and Commerce, and the respective Observers.

Udine			30.06	763.4	48.2	9.0	68	Calm	0	0			8			0	0		Prof. Giovanni Cledig.
Stelvio	22.14	562.4			27.0	— 2.8		W			2		10			0	0	Foggy	Signora Ernesta Manfredi.
Valdobbia	22.18	563.4			27.3	— 2.6	70	W			6		3	N		0	0		Ab. Dom. Mongini.
Padua			30.07	763.6	46.4	8.0	76	S	2.7	1.1			3			0	0		Prof. Dott. Lorenzoni.
Vicenza			30.05	763.3	48.9	9.4	76	S	2.6	1.1			1			0	0		Conte Alm. Da Schio.
Verona			30.07	763.6	50.0	10.0	62	E			1		10			0	0		Dott. B. Bertoncelli.
Bergamo	28.70	729.0	30.07	763.6	48.9	9.4	53	SW			2		2			0	0		Prof Trionfini Carlo.
Domodossola			30.05	763.3	55.0	12.8	50	S			4		4			0	0		Prof. Giuseppe Calza.
Milan			30.10	764.5	49.5	9.7	79	NW			1		0			0	0		Ab. Gio. Capelli.
Pavia			30.11	764.8	39.4	4.1	92	NW			1		10			0	0	Foggy	Prof. Gio. Cantoni.
Moncalieri			30.11	764.9	43.7	6.5	73	NNW	7.4	3.3			1			0	0		Prof. P. F. Denza.
Mondovi	28.14	714.8	30.11	764.9	56.3	13.5	30	NNW			4		1	NW		0	0		Prof. D. C. Bruno.
Porto Maurizio			30.17	766.3	54.9	12.7	71	SW			2		1			0	0		Prof. ... Vassallo.
Genoa			30.13	765.4	55.9	13.3	63	SW	1.8	0.8			2			0	0		Prof. G. M. Garibaldi.
Piacenza			30.11	764.8	41.0	5.0	90	NW	1.3	0.6			5			0	0		Dott. G. Manzi.
Parma			30.09	764.3	48.9	9.4	63	NNE			2		1			0	0		Prof. P. Pigorini.
Florence			30.14	765.5	52.7	11.5	79	N			2		0			0	0		Cav. F. Meucci.
Leghorn			30.10	764.6	56.3	13.5	57	WNW	3.1	1.4			2	N		0	0		Prof. P. Monte.
Siena	28.87	733.4	30.12	765.1	52.7	11.5	64	SW	0	0			0			0	0		Prof. L. Toscani.
Urbino	28.53	724.6	30.15	765.8	48.0	8.9	64	SSW			2		0			0	0		Prof. P. Serpieri.
Pesaro			30.11	764.8	45.5	7.5	84	N	9.8	4.4			0			0	0		Prof. Luigi Guidi.
Ancona			30.11	764.7	47.8	8.8	83	NW			2		1			0	0		Prof. F. De— Bosis.
Grosseto			30.13	765.1	56.5	13.6	59	WSW			2		2	SE		0	0		Avv. P. Ponticelli.
Rome			30.13	765.2	59.4	15.2	58	SW	1.3	0.6			1	W		0	0		Prof's. P. Secchi & L. Respighi.
Naples, O. U			30.11	764.9	58.1	14.5	71	WSW			4		5	NNW		0	0	Foggy	Prof. L. Palmieri.
Lecce			30.15	765.8	54.0	12.2	59	NE	9.8	4.4			1			0	0		Prof. C. De—Giorgi.
Cosenza			30.15	765.8	56.8	13.8	60	SW	1.3	0.6			3			0	0		Prof. F. D. Conti.
Cagliari			30.10	764.5	60.3	15.7	38	NW			2		6	NW		0	0		Prof. A. Pacinotti.
Ittiposto, (Sicily)			30.06	763.5	57.2	14.0	72	SE			2		8	N		0	0		Prof. F. Caflero.
Palermo			30.05	763.3	58.3	14.6	62	NW	1.3	0.6			10			0	0		Prof. G. Cacciatore.
Caltanissetta	28.12	714.2	30.13	765.4	49.1	9.5	79	NW			1		10	SE		0	0		Prof. A. Pagani.
Siracusa			30.15	765.7	57.2	14.0	69	E			1		10	WSW		0	0		Prof. V. Giuliano.
Sub-Series.																			
Naples, S. R.			30.19	766.8	57.6	14.2	76	WSW	1.8	0.8			7	W		0	0		Prof. F. Brioschi

Note.—The originals give the wind-force by the scale 0 to 4, or the velocity in kilometers per hour; generally, no distinction between upper and lower clouds occasionally the weather by the Vienna symbols. The elevation of Stelvio is 2,543.0 meters, or 8,342.9 feet; Valdobbia, 2,548.0 meters or 8,359.3 feet; Bergamo, 379.6 meters, or 1,24 3 feet; Monodovi, 556 meters, or 1,824.2 feet; Siena, 348.5 meters, or 1,143.3 feet; Urbino, 451 meters, or 1,479.7 feet; Caltanissetta, 570.3 meters, or 1,871.0 feet.

JAPANESE SERIES.

Furnished by the coöperation of the Imperial University of Tokei, Japan.

Tokei																			Prof. P. V. Veeder.

Note.—The originals give the amount of cloudiness by the scale 0 to 4 without distinguishing between upper and lower clouds. The rain-fall is measured at 7 a. m., cal time.

MEXICAN SERIES.

By authority of the Secretary of Public Works.

Furnished by the coöperation of Senor Mariano Barcena, Director of the Central Meteorological Observatory in the City of Mexico.

Mexico																			Mariano Barcena. Vicente Reyes. Miguel Perez. (Engineers in charge.)

Note.—The elevation of Mexico is 2,290 meters, or 7,512.9 feet. The rain-fall is measured at 6 a. m., local time.

NETHERLANDS' SERIES.

Furnished by the cooperation of Professor Buys Ballot, Director of the Royal Meteorological Institute of the Netherlands at Utrecht.

Flushing			30.10	764.5	45.7	7.6		W			4					0	0		
Groningen			29.83	757.7	44.1	6.7										0	0		
Helder			29.95	760.7	44.8	7.1		W			4					0.071	1.8		
Utrecht			29.98	761.4	48.4	9.1	68	W			5		5			0.024	0.6	Cloudy	

Note.—The originals give the wind-pressure in kilograms per square meter; for Utrecht, they give the weather as published, from which the amount of cloudiness is taken by the scale 0 to 4, without distinguishing between upper and lower clouds. It is assumed that the barometer readings have been reduced to sea-level.

NORWEGIAN SERIES.

Furnished by the coöperation of Professor H. Mohn, Director of the Royal Norwegian Meteorological Institute at Christiania.

Bergen			29.47	748.5	36.3	2.4	82	N	6.0	2.7			10			0.051	1.3		
Brönö			29.01	736.8	32.4	0.2	60	E	24.6	11			6			0	0		
Christiania			29.31	744.4	31.6	— 0.2	66	WSW	1.1	0.5			9			0	0		
Tromsö			29.17	740.9	25.5	— 3.6	60	N	4.5	2			10			0	0		

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols. The cloudiness and weather at Bergen refer to 2h., p. m., local time, instead of 1h., 4 min.

PORTUGUESE SERIES.

Furnished by the coöperation of J. C. de Brito Capello, Director of the Meteorological Observatory of the Infante Don Luiz at Lisbon.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Angra, (Azores)	.....	.....	30.09	764.3	59.9	15.5	91	S	6.9	3.1	.....	.....	9	.....	.....	0	0	.....	Dr. J. A. Sampaio.
Campo Major	.....	.....	30.34	770.7	61.2	16.2	49	SE	2.5	1.1	.....	.....	3	.....	.....	0	0	.....	Dr. A. M. R. dos Santos.
Funchal, (Madeira)	.....	.....	30.35	771.0	64.8	18.2	64	ESE	11.9	5.3	.....	.....	0	.....	.....	0	0	.....	Capt. D. A. de Cunha.
Lisbon	.....	.....	30.41	772.5	52.5	11.4	90	NNE	3.8	1.7	.....	.....	1	.....	.....	0	0	.....	The Observatory.
Ponta Delgada, (Azores)	.....	.....	30.19	766.7	63.0	17.2	80	SSE	10.5	4.7	.....	.....	3	.....	.....	0	0	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—The originals give the wind-velocity in kilometers per hour; occasionally, the weather by the Vienna symbols; the amount of cloudiness without distinguishing between upper and lower clouds; the barometer corrected but not reduced to sea-level. The rain-fall at Libson is measured at noon, instead of 0 h. 6 m., p. m.

RUSSIAN SERIES.

Furnished by the coöperation of Professor H. Wild, Director of the Imperial Central Physical Observatory of Russia, at St. Petersburg.

Warsaw	.....	.....	29.55	750.5	35.2	1.8	90	WSW	27	12	.....	.....	10	.....	.....	.....	.....	Rain & snow	Astronomical Obs.
Wilna	.....	.....	29.36	745.7	34.5	1.4	84	S	2	1	.....	.....	10	.....	.....	.....	.....	Snowing	Astronomical Obs.
Dorpat	.....	.....	29.31	744.4	25.9	— 3.4	94	ESE	7	3	.....	.....	10	.....	.....	.....	.....	Light snow	Physical Cabinet.
St. Petersburg	.....	.....	29.48	748.7	16.2	— 8.8	87	SE	18	8	.....	.....	10	.....	.....	.....	.....	.....	Central Physical Obs.
Kuopio	.....	.....	29.37	746.1	17.2	— 8.2	100	SSE	22	10	.....	.....	10	.....	.....	.....	.....	Snowing	Ch. Forsten.
Kieff	.....	.....	29.63	752.7	25.7	— 3.5	95	SSE	7	3	.....	.....	10	.....	.....	.....	.....	Snowing	Physical Cabinet.
Nikolaiev	.....	.....	29.86	758.5	30.4	— 0.9	78	Calm	0	0	.....	.....	9	.....	.....	.....	.....	.....	Kurdukof.
Kertch	.....	.....	29.85	758.1	26.4	— 3.1	91	WNW	13	6	.....	.....	5	.....	.....	.....	.....	.....	Lagorio.
Moscow	.....	.....	29.86	758.5	— 0.4	—18.0	84	S	4	2	.....	.....	3	.....	.....	.....	.....	.....	Meteorological Obs.
Lugan	.....	.....	29.39	746.5	27.1	— 2.7	83	NE	9	4	.....	.....	10	.....	.....	Blank	Blank	.....	Meteorological Obs.
Archangel	.....	.....	29.90	759.4	—12.3	—24.6	85	SE	29	13	.....	.....	10	.....	.....	.....	.....	.....	Ogorodnikof.
Tiflis	28.33	719.5	29.76	755.9	44.4	6.9	41	NW	31	14	.....	.....	6	.....	.....	.....	.....	.....	Physical Observatory.
Astrakhan	.....	.....	29.78	756 3	21.6	— 5.8	90	SE	9	4	.....	.....	10	.....	.....	.....	.....	.....	Sebastianof.
Kasan	.....	.....	30.08	764.1	—14.1	—25.6	73	NNE	4	2	.....	.....	4	.....	.....	.....	.....	.....	Physical Cabinet.
Orenburg	.....	.....	30.70	779.7	— 0.6	—18.1	78	E	13	6	.....	.....	0	.....	.....	.....	.....	.....	Tschernischef.
Ekaterinburg	29.23	742.5	30.34	770.7	- 21.1	—29.5	80	NE	2	1	.....	.....	10	.....	.....	.....	.....	.....	Meteorogical Obs.
Nukuss	.....	.....	29.76	755.8	45.0	7.2	69	SW	2	1	.....	.....	7	.....	.....	.....	.....	.....	.....
Kasaly	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Bobrof.
Tashkend	28.39	721.1	30.19	766.9	30.2	— 1.0	80	NE	0	0	.....	.....	8	.....	.....	.....	.....	.....	Michelson.
Barnaul	.....	.....	30.60	777.1	—12.8	—24.9	80	Calm	0	0	.....	.....	1	.....	.....	.....	.....	.....	Meteorological Obs.
Yeniseisk	.....	.....	30.66	778.7	—16.4	—26.9	67	Calm	0	0	.....	.....	0	.....	.....	.....	.....	.....	Marks.
Irkutsk	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Usolzef.
Peking, (China)	.....	.....	30.45	773.5	25 9	— 3.4	43	NNW	13	6	.....	.....	4	.....	.....	.....	.....	.....	Physical Observatory.
Nertchinsk	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Meteorological Obs.
Vladivostock	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Nikolaievsk, on the Amoor	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
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.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols; they omit the rain-fall. The elevation of Tiflis is 409 meters, or 1,341.8 feet; Ekaterinburg, 306. 4 ? m., or 1,005.2 ? ft.; Tashkend, 494.2 ? m., or 1,621.3 ? ft.; Irkutsk, 392 m., or 1,286 ft.; Nertchinsk, 602.0 ? m., or 1,942.2 ? ft.

SPANISH SERIES.

Furnished by the coöperation of Antonio Aguilar, Director of the Royal Observatory at Madrid, and of Don Cecilio Pujazon, Captain R. N. Director of the Naval Observatory at San Fernando.

Madrid	.....	.....	30.37	771.4	53.6	12.0	53	SE	3.7	1.67	.....	1	0	NE	.....	0	0	Slightly cl'dy	Royal Observatory.
San Fernando	.....	.....	30.39	771.9	59.0	15.0	59	NW	4.9	2.2	.....	2	2	W	W	.....	.....	.....	Naval Observatory.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
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.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—The originals give the weather in general terms, as published; rain-fall for San Fernando from preceding to following midnight; wind-velocity for Madrid in kilometers per hour.

SWEDISH SERIES.

Furnished by the coöperation of Professor R. Rubenson, Director of the Royal Swedish Meteorological Institute, at Stockholm, and of Dr. H. H. Hildebrandsson, Chief of the Meteorological Division of the Upsala Observatory.

Haparanda	.....	.....	29.39	746.6	15.8	— 9.0	94	S	.....	.....	2	.....	6	.....	.....	0.36	9.	.....	
Umea	.....	.....	29.35	745.5	21.9	— 5.6	96	N	.....	.....	2	.....	10	.....	.....	0.378	9.6	.....	
Hernosand	.....	.....	29.22	742.3	17.8	— 7.9	100	Calm	.....	.....	0	.....	10	.....	.....	0.181	4.6	Foggy	
Stockholm	.....	.....	29.18	741.1	26.6	— 3.0	91	WNW	.....	.....	2	.....	2	.....	.....	0	0	.....	
Wisby	.....	.....	29.25	742.9	34.2	1.2	85	NW	.....	.....	6	.....	7	.....	.....	0	0	.....	
SUB-SERIES.																			
Upsala	.....	.....	29.21	741.8	21.2	— 6.0	91	NW	0	0	.....	.....	0	.....	.....	0.004	0.11	.....	Dr. Hildebrandsson.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—The originals give the wind-force by the scale 0 to 6, and Upsala also velocity in meters per second; occasionally, the weather by the Vienna symbols, or in general terms; no distinction between the amount of upper and lower clouds. The rain-fall is measured at 8 a. m., local time.

SWISS SERIES.

Furnished by the coöperation of Professor R. Wolf, Director of the Observatory at Zurich, and of Professor E. Plantamour, Director of the Obse vatory at Geneva.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Geneva	28.85	732.9	30.30	769.5	49.3	9.6	68	SSW	.....	.....	2	.....	10	.....	.....	0.004	0.1	Covered	The Observatory.
Zurich	28.56	725.3	30.22	767.6	45.7	7.6	80	W	.....	.....	2	.....	9	.....	.....	0.102	2.6	Raining.....	The Observatory.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—For Geneva the corresponding departures from the normal values are: Barometer, +6.3 mm; Thermometer, +6.6 cent.; Relative Humidity, —5 per cent.

NOTE.—The rain-fall is measured at Zurich at 7 a. m. on the following day. The originals give the barometer corrected but not reduced to sea-level; the wind-force by t scale 0 to 4 for Zurich; the amount of cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The elevation of Geneva is 408 meters, 1,339 feet, and that of Zurich 470 meters, or 1,542 feet.

TURKISH SERIES.

Furnished by the coöperation of A. Coumbary, Effendi, Director of the Central Observatory at Constantinople, and of Professor C. V. A. Van Dyck, Superintendent of the Lee Observatory at Beirut.

Constantinople	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Fao, (Persian Gulf)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Salonica	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Valona	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Varna	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
SUB-SERIES.																			
Beirut, (Syria,) Lee Obs'y	.....	.....	30.00	762.0	61.7	16.5	55	W	.....	.....	2	.....	7k	.....	W	0.41	10.4	*D. clouds.....	Prof. C. V. A. Van Dyc

NOTE.—The originals give the wind-force by the scale 0 to 7, (except Beirut, by the scale 0 to 12, and Constantinople velocity in meters per second;) the weather in gene terms as published; no distinction between upper and lower clouds, and, except Constantinople and Beirut, the amount by the scale 0 to 4. It is assumed that the barome is reduced to sea-level. *Detached clouds.

CANADIAN SERIES.

Furnished by the coöperation of Professor G. T. Kingston, Director of the Magnetic Observatory at Toronto, and Superintendent of the Meteorologi Office of the Dominion of Canada, and the respective Observers. Those marked with a star (*) are also telegraphed daily to the office of the Chief Signal Officer, U. S. Army.

Bathurst, N. B	.....	.....	29.96	761.0	11.6	—11.3	84	Calm	0	0	.....	.....	10	.....	.....	.....	.....	.....	Hon. J. Ferguson.
Brockville, Ontario	.....	.....	30.17	766.3	17	— 8.3	.....	SW	1	0.4	.....	2c	0	SW	.....	0	0	Fair.....	W. R. Bigg.
*Chatham, N. B	.....	.....	29.95	760.7	— 1	—18.3	100	SW	1	0.4	.....	5ck	5ks	W	W	0.01	0.3	Fair.....	G. A. Blair.
Charlottetown, P. E. Island	.....	.....	29.97	761.2	16	— 8.9	90	Calm	0	0	.....	.....	10n	.....	.....	Inap.	Inap.	Light snow..	H. J. Cundall, C. E.
Cornwall, Ontario	.....	.....	30.13	765.3	13.9	—10.1	94	W	.....	.....	1	0	0	.....	.....	0	0	Bright.....	James Smith, M. A.
Dalhousie, N. B	.....	.....	29.95	760.7	8.0	—13.3	96	W	.....	.....	1	.....	.....	.....	.....	0.03	0.8	Overcast.....	H. A. Johnson.
Esquimault, B. C	.....	.....	29.91	759.7	36.1	2.3	71	NW	.....	.....	.....	0	0	.....	.....	0	0	Clear.....	W. H. Bevis.
*Father Point, Quebec	.....	.....	29.97	761.2	13	—10.6	93	SE	2	0.9	.....	.....	10n	.....	.....	0	0	Cloudy.....	J. McWilliams.
Fredericton, N. B	.....	.....	30.03	762.7	5.1	—14.9	98	W	1	0.4	.....	.....	10ks	.....	W	0	0	Cloudy.....	Prof. Harrison.
*Fort Garry, Manitoba	.....	.....	29.68	753.9	19	— 7.2	92	S	6	2.7	.....	0	0	.....	.....	0	0	Clear.....	James Stewart.
Goderich, Ontario	.....	.....	30.27	768.8	20.1	— 6.6	83	Calm	.....	.....	0	0	0	.....	.....	0	0	Clear.....	H. J. Strang, M. A.
Granton, Ontario	29.06	738.1	30.25	768.3	15.4	— 9.2	.....	Calm	.....	.....	0	0	0	.....	.....	0	0	Clear.....	James Grant.
*Halifax, N. S	.....	.....	29.95	760.7	24	— 4.4	94	E	2	0.9	.....	.....	10n	.....	.....	0.010	0.25	Light snow..	F. Allison, M. A.
Hamilton, Ontario	.....	.....	30.27	768.8	21.2	— 6.0	71	W	.....	.....	1	0	0	.....	.....	0	0	Clear.....	G. Dickson.
Heart's Content, N. F	.....	.....	29.43	747.5	27	— 2.8	100	NE	.....	.....	4	.....	10	.....	.....	0	0	Overcast.....	E. Weedon.
*Kingston, Ontario	.....	.....	30.22	767.6	17	— 8.3	80	Calm	0	0	.....	2k	0	.....	.....	0	0	Fair.....	S. Woods, M. A.
*Montreal, Quebec	.....	.....	30.07	763.8	14	—10.0	82	W	16	7.2	.....	0	0	.....	.....	0	0	Clear.....	C. H. McLeod, C. E.
*Ottawa, Ontario	.....	.....	30.13	765.3	12	—11.1	80	W	8	3.6	.....	2cs	0	W	.....	0	0	Clear.....	J. B. Haney.
*Parry Sound, Ontario	.....	.....	30.23	767.8	5	—15.0	63	Calm	0	0	.....	0	0	.....	.....	0	0	Clear.....	Rev. R. Mosley.
Port Dover, Ontario	.....	.....	30.27	768.8	18	— 7.8	98	NW	4	1.8	.....	0	0	.....	.....	0	0	Clear.....	H. Morgan.
Port Hastings, N. S	.....	.....	29.98	761.5	20.9	— 6.2	.....	NW	5	2.2	.....	.....	.....	.....	.....	0	0	Clear.....	Peter Grant.
Port Stanley, Ontario	.....	.....	30.26	768.6	12	—11.1	100	N	4	1.8	.....	0	0	.....	.....	0	0	Fine.....	M. Payne.
*Quebec, Quebec	.....	.....	30.01	762.2	15	— 9.4	82	S	3	1.3	.....	.....	10n	.....	S	0.10	2.5	Clear.....	Capt. Ashe, R. N.
*Rockliffe, Ontario	.....	.....	30.16	766.1	13	—10.6	94	NW	5	2.2	.....	.....	5s	.....	NW	0	0	Cloudy.....	
St. John, N. B	.....	.....	30.01	762.2	21	— 6.1	78	NW	2	0.9	.....	5ks?	0	.....	.....	0	0	Fair.....	
*Saugeen, Ontario	.....	.....	30.22	767.6	13	—10.6	90	Calm	0	0	.....	0	0	.....	.....	0	0	Fair.....	G. Murdoch, C. E.
Stayner, Ontario	.....	.....	30.25	768.3	13	—10.6	96	Calm	0	0	.....	0	0	.....	.....	Inap.	Inap.	Clear.....	K. Stewart.
Stratford, Ontario	28.86	733.0	30.27	768.8	6.7	—14.1	98	Calm	0	0	.....	.....	Fog	.....	.....	0	0	Clear.....	R. J. Cole.
*Sydney, C. B	.....	.....	29.92	760.0	19	— 7.2	89	NW	4	1.8	.....	2ck	0	W	.....	0	0	Foggy.....	C. J. MacGregor, M.
*Toronto, Ontario	.....	.....	30.25	768.3	15	— 9.4	80	W	5	2.2	.....	0	0	.....	.....	0	0	Clear.....	T. C. Hill.
Woodstock, Ontario	.....	.....	30.27	768.8	12.1	—11.1	94	W	3	1.3	.....	0	3s	.....	.....	0	0	Fair.....	Magnetic Observatory
SUB-SERIES.																			
St. Johns, Newfoundland	.....	.....	29.40	746.7	.....	.....	89	N	.....	.....	.....	Sm'e	Sm'e	.....	.....	0.06	1.5	Fair.....	J. Montgomery.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	John Delany.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—The originals for Brockville, Charlottetown, Port Dover, Port Stanley, Stayner, St. Johns, N. F. and those telegraphed, give the amount of cloudiness by the scale 0 to 4. The elevation of Granton is 1,015 feet, or 309.4 m.; Stratford, 1,182 feet, or 360.3 m

UNITED STATES SERIES.

Furnished by the coöperation of Bvt. Brig. Gen. Albert J. Myer, Chief Signal Officer, U. S. Army.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Upper. 0—10.	Clouds. Amount. Low'r. 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Albany, N. Y.	.....	.....	30.14	765.5	16	— 8.9	83	Calm	0	0	.....	1k	0	W	.....	0	0	Fair	
Alpena, Mich.	.....	.....	30.24	768.1	11	—11.7	79	NW	2	0.9	.....	0	0	.....	.....	0	0	Clear	
Atlantic City, N. J.	.....	.....	30.15	765.8	27	— 2.8	77	NW	10	4.5	.....	5c	0	W	.....	0	0	Fair	
Augusta, Ga.	.....	.....	30.09	764.3	45	7.2	76	E	7	3.1	.....	.....	10s	.....	E	0	0	Cloudy	
Baltimore, Md.	.....	.....	30.18	766.6	32	0.0	69	Calm	0	0	.....	5c	Sm'k	.....	.....	0	0	Fair	
Barnegat, N. J.	.....	.....	30.13	765.3	26	— 3.3	76	N	13	5.8	.....	5c	0	W	.....	0	0	Fair	
Bismarck, Dakota	27.93	709.4	29.66	753.4	16	— 8.9	66	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Boston, Mass.	.....	.....	30.06	763.5	22	— 5.6	72	W	2	0.9	.....	4cs	Sm'k	W	.....	0	0	Fair	
Breckenridge, Minn.	.....	.....	29.84	757.9	19	— 7.2	84	SE	16	7.2	.....	0	0	.....	.....	0	0	Clear	
Buffalo, N. Y.	.....	.....	30.22	767.6	19.0	— 7.2	84	SW	1	0.4	.....	0	1s	.....	.....	0	0	Clear	
Burlington, Vt.	.....	.....	30.12	765.0	26	— 3.3	66	Calm	0	0	.....	0	8s	.....	.....	0	0	Cloudy	
Cairo, Ill.	.....	.....	30.12	765.0	39	3.9	81	N	5	2.2	.....	2c	2s	.....	.....	0	0	Fair	
Cape Hatteras, N. C.	.....	.....	29.99	761.7	43	6.1	83	NE	16	7.2	.....	10cs	0	.....	.....	0	0	Cloudy	
Cape Henry, Va.	.....	.....	30.12	765.0	38	3.3	72	N	10	4.5	.....	5c	0	W	.....	0	0	Fair	
Cape Lookout, N. C.	.....	.....	30.05	763.3	43	6.1	88	NE	15	6.7	.....	.....	10s	.....	.....	0	0	Cloudy	
Cape May, N. J.	.....	.....	30.15	765.8	26	— 3.3	76	N	7	3.1	.....	0	8s	.....	NW	0	0	Fair	
Charleston, S. C.	.....	.....	30.06	763.5	45	7.2	80	N	8	3.6	.....	5ck	2s	S	.....	0	0	Fair	
Cheyenne, Wyoming	23.92	607.6	29.86	758.4	28	— 2.2	59	NW	16	7.2	.....	0	0	.....	.....	0	0	Clear	
Chicago, Ill.	.....	.....	30.17	766.3	34	1.1	79	SW	3	1.3	.....	.....	10s	.....	.....	0	0	Cloudy	
Cincinnati, Ohio	.....	.....	30.09	764.3	35	1.7	70	N	4	1.8	.....	8ck	Sm'k	.....	.....	0	0	Fair	
Cleveland, Ohio	.....	.....	30.23	767.8	22.5	— 5.3	79	N	4	1.8	.....	.....	10s	.....	.....	0	0	Cloudy	
Corsicana, Tex.	.....	.....	30.23	767.8	38	3.3	90	NW	7	3.1	.....	0	5s	.....	NW	0	0	Fair	
Davenport, Iowa	.....	.....	30.22	767.6	30	— 1.1	89	SE	1	0.4	.....	.....	Fog	.....	.....	0	0	Foggy	
Denison, Tex.	.....	.....	30.22	767.6	39	3.9	80	NW	14	6.3	.....	.....	10s	.....	N	Inap.	Inap.	Cloudy	
Denver, Col.	24.73	628.1	30.27	768.8	39	3.9	87	S	8	3.6	.....	0	0	.....	.....	0	0	Clear	
Detroit, Mich.	.....	.....	30.21	767.3	24	— 4.4	62	S	3	1.3	.....	0	Sm'k	.....	.....	0	0	Clear	
Dodge City, Kan.	27.49	698.2	29.92	760.0	25	— 3.9	87	NE	1	0.4	.....	0	0	.....	.....	0.01	0.3	Clear	
Dubuque, Iowa	.....	.....	30.20	767.1	24	— 4.4	79	W	0	0	.....	.....	Fog	.....	.....	0	0	Foggy	
Duluth, Minn.	.....	.....	29.91	759.7	28	— 2.2	83	SW	4	1.8	.....	5c	0	.....	.....	0	0	Fair	
Eastport, Me.	.....	.....	30.00	762.0	18	— 7.8	83	NW	10	4.5	.....	8c	0	SW	.....	0	0	Fair	
Erie, Pa.	.....	.....	30.23	767.8	20	— 6.7	85	Calm	0	0	.....	0	Fog	.....	.....	0	0	Clear	
Escanaba, Mich.	.....	.....	30.13	765.3	26	— 3.3	76	S	11	4.9	.....	.....	8s	.....	.....	0	0	Cloudy	
Fort Gibson, Indian Ter.	.....	.....	30.18	766.6	40	4.4	82	NW	7	3.1	.....	.....	1cs	.....	.....	0	0	Cloudy	
Ft. St. Michael, Alaska	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Fort Sill, Indian Ter.	29.00	736.6	30.15	765.8	40	4.4	48	W	4	1.8	.....	0	2ck	.....	NW	0	0	Fair	
Fort Sully, Dakota	28.12	714.2	29.83	757.7	26	— 3.3	88	NE	5	2.2	.....	0	0	.....	.....	0	0	Clear	
Florence, Arizona	28.39	721.1	29.90	759.4	55	12.8	.....	NE	.....	.....	.....	0	0	.....	.....	0	0	Clear	
Galveston, Tex.	.....	.....	30.19	766.8	60	10.0	78	N	27	12.1	.....	0	0	.....	.....	0	0	Clear	
Grand Haven, Mich.	.....	.....	30.20	767.1	22	— 5.6	79	E	4	1.8	.....	0	1s	.....	NW	0	0	Clear	
Indianapolis, Ind.	.....	.....	30.14	765.5	34	1.1	74	NE	1	0.4	.....	0	Sm'k	.....	.....	0	0	Clear	
Indianola, Tex.	.....	.....	30.34	770.6	47	8.3	85	N	24	10.7	.....	0	0	.....	.....	0	0	Clear	
Jacksonville, Fla.	.....	.....	30.01	762.2	60	10.0	86	Calm	0	0	.....	2k	0	.....	.....	0	0	Clear	
Keokuk, Iowa	.....	.....	30.12	765.0	30	— 1.1	89	Calm	0	0	.....	0	0	.....	.....	0.02	0.5	Clear	
Key West, Fla.	.....	.....	29.99	761.7	66	18.9	90	NW	8	3.6	.....	0	8ks	.....	.....	0	0	Cloudy	
Kittyhawk, N. C.	.....	.....	30.10	764.5	39	3.9	81	NE	24	10.7	.....	8cs	0	.....	.....	0	0	Fair	
Knoxville, Tenn.	.....	.....	30.05	763.3	35	1.7	80	Calm	0	0	.....	0	Fog	.....	.....	0	0	Fair	
La Crosse, Wis.	.....	.....	30.14	765.5	23	— 5.0	78	S	12	5.4	.....	0	0	.....	.....	0	0	Clear	
Leavenworth, Kan.	.....	.....	30.21	767.3	31	— 0.6	89	W	3	1.3	.....	.....	Fog	.....	.....	0.01	0.3	Dense fog	
Louisville, Ky.	.....	.....	30.11	764.8	33	0.0	79	N	5	2.2	.....	2cs	0	.....	.....	0	0	Clear	
Lynchburg, Va.	.....	.....	30.15	765.8	33	0.6	85	Calm	0	0	.....	5c	Sm'k	W	.....	0	0	Fair	
Malone, N. Y.	.....	.....	30.12	765.0	18	— 7.8	68	W	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Marquette, Mich.	.....	.....	30.08	764.0	30	— 1.1	78	SW	8	3.6	.....	.....	10s	.....	.....	0	0	Cloudy	
Memphis, Tenn.	.....	.....	30.11	764.8	42	5.6	75	N	4	1.8	.....	2c	2ks.he	.....	NW	0	0	Fair	
Milwaukee, Wis.	.....	.....	30.21	767.3	30	— 1.1	89	S	3	1.3	.....	.....	10s	.....	.....	0	0	Cloudy	
Mobile Ala.	.....	.....	30.05	763.3	49	9.4	85	N	1	0.4	.....	Haze	5s	.....	.....	0	0	Fair	
Montgomery, Ala.	.....	.....	30.05	763.3	45	7.2	92	Calm	0	0	.....	2cs	Fog	.....	.....	Inap.	Inap.	Fair	
Morgantown, W. Va.	29.05	737.9	30.16	766.1	26	— 3.3	75	Calm	0	0	.....	0	Sm'k	.....	.....	0	0	Clear	
Mt. Washington, N. H.	23.34	592.8	29.70	754.4	— 3	—19.4	100	NW	48	21.5	.....	.....	Fog	.....	.....	0	0	Foggy	
Nashville, Tenn.	.....	.....	30.03	762.7	38	3.3	81	NW	2	0.9	.....	0	Fog	.....	.....	0	0	Clear	
New Haven, Conn.	.....	.....	30.13	765.3	28	— 2.2	67	N	2	0.9	.....	0	0	.....	.....	0	0	Clear	
New London, Conn.	.....	.....	30.11	764.8	27	— 2.8	66	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
New Orleans, La.	.....	.....	30.04	763.0	51	10.6	65	W	5	2.2	.....	2c	2cs	N	.....	0	0	Fair	
Newport, R. I.	.....	.....	30.08	764.0	27	— 2.8	77	Calm	0	0	.....	2c	Sm'k	W	.....	0	0	Clear	
New York, N. Y.	.....	.....	30.14	765.5	27	— 2.8	71	N	4	1.8	.....	8c,ck	0	NW	.....	0	0	Fair	
Norfolk, Va.	.....	.....	30.13	765.3	36	2.2	80	NE	3	1.3	.....	5c	Sm'k	W	.....	0	0	Fair	
North Platte, Neb.	27.04	686.8	29.74	755.4	22	— 5.6	85	W	4	1.8	.....	8c	Fog	.....	.....	0	0	Fair	
Omaha, Neb.	26.98	736.1	30.13	765.3	24	— 4.4	74	SW	2	0.9	.....	0	0	.....	.....	0	0	Clear	
Oswego, N. Y.	.....	.....	30.20	767.1	26.5	— 3.2	77	N	4	1.8	.....	0	2s	.....	.....	0	0	Clear	
Pembina, Dakota	.....	.....	29.72	754.9	20	— 6.7	85	S	14	6.3	.....	Haze	0	.....	.....	0	0	Clear	
Philadelphia, Pa.	.....	.....	30.16	766.1	27	— 2.8	55	N	14	6.3	.....	0	0	.....	.....	0	0	Clear	
Pike's Peak, Col.	17.60	447.0	29.80	756.9	3.6	—15.8	88	NE	24	10.7	.....	2c	0	W	.....	0	0	Clear	
Pittsburgh, Pa.	.....	.....	30.18	766.6	25	— 3.9	87	E	3	1.3	.....	0	Fog	.....	.....	0	0	Fair	
Port Huron, Mich.	.....	.....	30.21	767.3	24	— 4.4	87	Calm	0	0	.....	2cs	Haze	NE	.....	0	0	Hazy	
Portland, Me.	.....	.....	30.03	762.7	15	— 9.4	83	NW	7	3.1	.....	1k	Haze	NW	.....	0	0	Clear	
Portland, Oregon	.....	.....	29.83	757.7	43	6.1	91	N	4	1.8	.....	.....	10n	.....	.....	0.37	9.4	Light rain	
Punta Rassa, Fla.	.....	.....	30.02	762.5	62.5	16.9	80	N	8	3.6	.....	0	0	.....	.....	0.01	0.3	Clear	
Rochester, N. Y.	.....	.....	30.19	766.8	24	— 4.4	87	NW	6	2.7	.....	0	8s	.....	NW	0	0	Fair	
Salt Lake City, Utah	25.69	652.5	30.02	762.5	18	— 7.8	100	SE	2	0.9	.....	.....	10s	.....	.....	0	0	Cloudy	
Sandy Hook, N. J.	.....	.....	30.10	764.5	27	— 2.8	66	NW	12	5.4	.....	1c	0	NW	.....	0	0	Clear	
San Diego, Cal.	.....	.....	29.98	761.5	52	11.1	43	NE	3	1.3	.....	0	0	.....	.....	0	0	Clear	
San Francisco, Cal.	.....	.....	29.96	761.0	50	10.0	86	N	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Santa Fé, N. M.	23.24	590.3	29.78	756.4	23	— 5.0	60	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Savannah, Ga.	.....	.....	30.06	763.5	43	6.1	83	N	4	1.8	.....	0	Sm'k	.....	.....	0	0	Clear	
Shreveport, La.	.....	.....	30.22	767.6	43	6.1	92	W	4	1.8	.....	0	Sm'k	.....	.....	0	0	Clear	
Smithville, N. C.	.....	.....	30.04	763.0	42	5.6	42	N	11	4.9	.....	.....	10ks	.....	.....	0	0	Cloudy	
Springfield, Mass.	.....	.....	30.11	764.8	21	— 6.1	70	Calm	0	0	.....	0	Haz.	.....	.....	0	0	Clear	
St. Louis, Mo.	.....	.....	30.17	766.3	35	1.7	80	N	6	2.7	.....	0	0	.....	.....	0	0	Clear	
St. Marks, Fla.	.....	.....	30.04	763.0	45	7.2	100	Calm	0	0	.....	.....	0	.....	.....	0	0	Cloudy	
St. Paul, Minn.	.....	.....	30.01	762.2	27	— 2.8	88	SE	10	4.5	.....	0	10s	.....	.....	0	0	Clear	
St. Paul's Island, Alaska	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0	.....	.....	.....	.....	.....	
Thatcher's Island, Mass.	.....	.....	30.06	763.5	24	— 4.4	61	NW	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Toledo, Ohio	.....	.....	30.21	767.3	25	— 3.9	62	Calm	0	0	.....	.....	Fog	.....	.....	0	0	Dense fog	
Tucson, Arizona	27.55	699.8	30.10	764.5	35	1.7	.....	S	.....	.....	.....	5c	0	W	.....	0	0	Fair	
Tybee Island, Ga.	.....	.....	30.02	762.5	48	8.9	85	N	16	7.2	.....	0	5s	.....	.....	0	0	Fair	
Vicksburg, Miss.	.....	.....	30.12	765.0	49	9.4	66	N	2	0.9	.....	10k	2s	W	.....	Inap.	Inap.	Cloudy	
Virginia City, M. T.	24.08	611.6	29.56	750.8	23	— 5.0	66	SE	1	0.4	.....	1k	0	NW	.....	0	0	Clear	
Washington, D. C.	.....	.....	30.19	766.8	27.6	— 2.0	77	NE	2	0.9	.....	5c	ls,sm'	W	SW	0	0	Smoky	
Wilmington, N. C.	.....	.....	30.06	763.5	39	3.3	63	NE	6	2.7	.....	.....	10s	.....	.....	0	0	Cloudy	

UNITED STATES SERIES.—CONTINUED.

STATIONS.	BAROMETER. Corrected for instrum'tal error and temperature. Inches.	BAROMETER. Corrected for instrum'tal error and temperature. Millimeters.	BAROMETER. Reduced to sea-level. Inches.	BAROMETER. Reduced to sea-level. Millimeters.	TEMPERATURE OF THE AIR. Fahrenheit.	TEMPERATURE OF THE AIR. Centigrade.	RELATIVE HUMIDITY. Per cent.	WIND. Direction. From—	WIND. Velocity. Miles per hour.	WIND. Velocity. Meters per second.	WIND. Force. 0—10.	CLOUDS. Amount. Up'er 0—10.	CLOUDS. Amount. Low'r 0—10.	CLOUDS. Direction. Upper. From—	CLOUDS. Direction. Lower. From—	RAIN-FALL OR MELTED SNOW IN THE PAST 24 HOURS. Inches.	RAIN-FALL OR MELTED SNOW IN THE PAST 24 HOURS. Millimeters.	WEATHER.	OBSERVER.
Wood's Holl, Mass.	.....	.....	30.09	764.3	25	— 3.3	76	N	4	1.8	.....	5c	0	SW	.....	0	0	Fair	
Yankton, Dakota	28.68	728.5	30.02	762.5	28	— 2.2	71	SW	5	2.2	.....	2c	0	NW	.....	0	0	Fair	
Yuma, Arizona	.....	.....	30.00	762.0	50	10.0	.....	NE	.....	.....	.....	0	0	.....	.....	0	0	Clear	
SUB-SERIES.																			
Kingston, Jamaica, W. I.	.....	.....	30.16	766.1	74	23.3	76	Calm	0	0	.....	2c	0	.....	.....	0	0	.....	James Gall.
Navassa, W. I.	.....	.....	.....	.....	78	25.6	.....	ENE	.....	.....	2	.....	.....	.....	.....	0	0	.....	Dr. G. H. Davison.
Clifton, Ja., W. I.	27.16	689.8	29.98	761.5	60	15.6	88	.....	.....	.....	.....	.....	.....	.....	.....	0	0	.....	C. Partridge.
Paramaribo, D. Guiana, S. A.	.....	.....	30.03	762.7	78	25.6	95	E	.....	.....	3	.....	10n	.....	.....	1.690	42.93	Heavy rain.	C. J. Hering.
Batavia, Dutch Guiana, S. A.	30.04	762.9	.....	.....	76.6	24.8	.....	NE	.....	.....	.....	.....	.....	.....	.....	0.787	20.00	Showery	Dr. H. Groot.
Medellin, Colombia, S. A.	25.21	640.3	.....	.....	67.5	19.7	75	NW	.....	.....	1	0	2ks	.....	.....	0	0	Fair	Thomas Herran.
York Factory, B. A.	.....	.....	29.96	761.0	— 6.0	—21.1	81	NW	2	0.9	.....	.....	9s	.....	.....	0	0	Gloomy	J. Fortescue, W. Wood
Honolulu, Oahu, H. I.	.....	.....	30.13	765.3	70	21.1	95	NE	.....	.....	3	.....	.....	.....	.....	0	0	Squally	Daniel Smith.
Makawao, Maui, H. I.	.....	.....	30.00	762.0	60	15.6	81	Calm	.....	.....	0	2c	0	S	.....	0	0	.....	F. L. Clarke.

NOTE.—The originals give the amount of cloudiness by the scale 0 to 4, except York Factory, Makawao, Medellin and Paramaribo. The elevation of the barometer at Bismarck is 1,677 feet, or 511.1 meters; Cheyenne, 6,057.3 ft., or 1,846.2 m.; Clifton, about 2,892 ft. or 881.5 m.; Denver, 5,135 ft., or 1,565.2 m.; Dodge City, 2486ft., or 757.8 m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Florence, 1,550 (?) ft., or 472.5 (?) m.; Makawao, 1,906 ft., or 672.1 m.; Morgantown, 1,027.9 ft., or 313.3 m.; Medellin, 4,876 ft., or 1,486.2 m.; Mt. Washington, 6,285 ft., or 1,915.6 m.; North Platte, 2,846 ft., or 867.4 m.; Omaha, 1,054.6 ft., or 321.4 m.; Pike's Peak, 14,150.7 ft., or 4,313.1 m.; Salt Lake City, 4,362.2 ft., or 1,329.6 m.; Santa Fé, 6,862.2 (?) ft., or 2,091.6 (?) m.; Tucson, 2,545 (?) ft., or 775.7 (?) m.; Virginia City, 5,480 (?) ft., or 1,670.3 (?) m.; Yankton, 1,278 ft., or 389.5 m. The following constants are added in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Denver, 5.22 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fe, 6.54 in.; Tucson, 2.59 in.; Virginia City, 5.48 in. The elevation of Batavia is about 6 feet; the barometric readings need the addition of 0.2 mm. or 0.01 in. for reduction to sea-level.

UNITED STATES NAVAL SERIES.

By authority of the **SECRETARY OF THE NAVY.**

Furnished by the coöperation of the Navy Department, through Commodore Daniel Ammen, U. S. N., Chief of Bureau of Navigation.

STATIONS AND VESSELS.	True course toward—	Hourly rate in knots.	*Barometer as reported.		Temperature of the Air.		Relative Humidity.	Wind.			Clouds.				Rain-fall or melted snow in the past 24 hours.		State of Ocean.	Direction of swell from—	Weather.	OBSERVER.
								Direction.	Velocity		Force.	Amount.		Direction.							
												Up'er	Low'r	Up'er	Low'r						
			Inches.	Millimeters.	Fahrenheit.	Centigrade.	Per cent.	From—	Miles per hour.	Meters per second.	0—10.	0—10.	0—10.	From—	From—	Inches.	Millimeters.				
Naval Academy, Annapolis, Md.			29.81	757.2	28	— 2.2	.....	NNE	.....	.....	1	.....	4	.....	.....	0	0	.....	.....	Clear	
Naval Hospital, Annapolis, Md.			30.15	765.8	27	— 2.8	76	NE	.....	.....	1	.....	1	.....	.....	0	0	.....	.....	Clear	
Navy Yard, Mare Island, Cal.			30.13	765.3	52	11.1	96	S	.....	.....	2	.....	10?	.....	.....	0	0	.....	.....	Clear?	
Navy Yard, Norfolk, Va.			30.26†	768.6†	37	2.8	90	WSW	.....	.....	2	.....	4cs	.....	.....	.....	.....	.....	.....	‡D. clouds	
Navy Yard, Pensacola, Fla.			30.08	764.0	51	10.6	93	NNW	.....	.....	1	.....	3	.....	.....	0	0	.....	.....	‡D. clouds	
Navy Yard, Portsmouth, N.H.			30.03	762.7	14	—10.0	.....	NW	.....	.....	3	.....	.....	.....	S & W	.....	.....	.....	.....	Clear	
¶ Canonicus, New Orleans, La.			30.02	762.5	49	9.4	85	WNW	.....	.....	3	.....	0	.....	.....	.....	.....	.....	.....	Low mist	
Colorado, New York, N. Y.			30.17	766.3	27	— 2.8	.....	NNW	.....	.....	3	.....	4	.....	.....	0	0	.....	.....	Hazy	
Essex, N. 32°, 15′, W. 79°, 20′			30.05	763.3	57	13.9	.....	N	.....	.....	5	.....	10	.....	.....	.....	.....	Moderate.	NNE	Overcast	
Hartford, Norfolk Va.			30.34	770.6	37	2.8	.....	NE	.....	.....	1	.....	2	.....	.....	0	0	.....	.....	Pleasant	
Lackawana, Mare Island, Cal.			30 13†	765.3†	55	12.8	87	Calm	.....	.....	0	.....	.....	.....	.....	.....	.....	Smooth	.....	Foggy	
Marion, N. 33°, 02′, E. 35°, 01′			29.99	761.7	63	17.2	78	S	.....	.....	2	.....	6	.....	ENE	.....	.....	Long swells.	WSW	Squally	
Michigan, Erie, Pa.			30.15	765.8	15	— 9.4	82	N	.....	.....	1	.....	10	.....	.....	.....	.....	.....	.....	Cloudy	
Monongahela, Baltimore, Md.			30.18	766.6	34	1.1	.....	Calm	.....	.....	0	.....	..cs	.....	.....	.....	.....	.....	.....	‡D. clouds	
New Hampshire, Port Royal, S. C.			30.23	767.8	49	9.4	.....	N	.....	.....	2	.....	3	.....	S	.....	.....	Smooth	.....	‡D. clouds	
Omaha, Panama.			30.03	762.7	75	23.8	93	NNW	.....	.....	1	.....	2	.....	.....	0	0	Smooth	.....	Pleasant	
Ossipee, New Orleans, La.			30.05	763.3	47	8.3	.....	W	.....	.....	1	.....	0	.....	.....	.....	.....	.....	.....	Hazy	
Pensacola, Panama.			30.04	763.0	77	25.0	95	NNW	.....	.....	1	.....	1	.....	.....	.....	.....	.....	.....	.....	
Plymouth, off South Pass, La.			30.17	766.3	54	12.2	87	WNW	.....	.....	2	.....	0	.....	.....	.....	.....	Very light.	SW	Pleasant	
¶ Rio Bravo, Matamoras, Mex.			30.02	762.5	49	9.4	93	NW	.....	.....	1	.....	4	.....	N	.....	.....	.....	.....	‡D. clouds	
Santee, Annapolis, Md.			29.74†	755.4†	31	— 0.6	.....	NNE	.....	.....	1	.....	4	.....	.....	.....	.....	.....	.....	Clear	
St. Louis, League Island, Pa.			30.00	762.0	30	— 1.1	.....	NNE	.....	.....	2	.....	2	.....	SE	0	0	.....	.....	Fair	
Vandalia, Constantinople, Turkey.			30.08	764.0	49	9.4	93	SSW	.....	.....	1	.....	4	.....	.....	.....	.....	.....	.....	‡D. clouds	
Wabash, Boston, Mass.			30.15	765.8	19	— 7.2	.....	NW	.....	.....	2	.....	2	.....	W	.....	.....	.....	.....	Hazy	
Wyoming, Washington, D.C.			30.26†	768.6†	28	— 2.2	.....	Calm	.....	.....	0	.....	3	.....	.....	.....	.....	.....	.....	Hazy	

* It is not known that the barometer is corrected for temperature, instrumental error or elevation. † Aneroid Barometer. ‡ Detached clouds. ¶ Barometer corrected for instrumental error and reduced to sea-level.

UNITED STATES MARINE SERIES

REPORTED TO THE OFFICE OF THE CHIEF SIGNAL OFFICER OF THE ARMY.

NAMES OF VESSELS.	True course toward—	Hourly rate in knots.	Barometer reduced to sea-level.		Temperature of the Air.		Relative Humidity.	Wind.				Clouds.				State of Ocean.	Direction of swell from—	Weather.	OBSERVER.
								Direction.	Velocity.		Force.	Amount.		Direction.					
												Up'er	Low'r	Upper.	Lower.				
			Inches.	Millimeters.	Fahrenheit.	Centigrade.	Per cent.	From—	Miles per hour.	Meters per second.	0—10.	0—10.	0—10.	From—	From—				
PACIFIC MAIL S. S. CO. MARINE SERIES. Furnished by the coöperation of ————, President; Williams, Blanchard & Co., Agents.																			
S. S. City of Peking			29.95	760.7	47	8.3	55	NE	4	1.8		2c	2s					Clear	Lt. Z. L. Tanner, U.S.N
OCCIDENTAL AND ORIENTAL S. S. CO. MARINE SERIES. Furnished by the coöperation of George H. Bradbury, President; T. H. Goodman, Agent.																			
S. S. Belgic																			Capt. John Metcalf.
S. S. Gaelic																			Capt. W. H. Kidley.
S. S. Oceanic																			Capt. H. Parsell.
NORTH GERMAN LLOYD OF BREMEN MARINE SERIES. Furnished by the coöperation of A. Schumacher & Co., Agents.																			
S. S. Baltimore																			Capt. H. Andressen.
S. S. Berlin																			Capt. C. Pohle.
S. S. Braunschweig																			Capt. K. Undütsch.
S. S. Nürnberg																			Capt. A. Jaeger.
S. S. Ohio																			Capt. G. Meyer.
MARINE SERIES. (Miscellaneous.) Furnished by the coöperation of Captain James Jorgensen.																			
Schooner Addie Fuller, at Brunswick, Ga			29.95	760.7	47	8.3	55	NE	4	1.8		2c	2s					Clear	Capt. James Jorgensen

NOTE.—The schooner Addie Fuller gives the amount of cloudiness by the scale 0 to 4.

COLLATED AT THE OFFICE OF THE CHIEF SIGNAL OFFICER OF THE ARMY, WASHINGTON, D. C.

The records which appear in this Bulletin are copied from the regular exchanges of this office, made in each instance in compliance with an especial reques and are published for the uses of the coöperating observers. The barometric readings in the first two columns are reduced to freezing and their respective standards; those in the second two also to mean sea-level. The "weather" is generally published as given.

When the distinction between the upper and lower strata of clouds is not reported, the *kinds* or *types*, viz: cirrus, cumulus, stratus, nimbus, scud, fracto, pallio, haze, fog and smoke, as indicated, respectively, by the letters c, k, s, n, d, f, p, hz., fg. and sm'e, are generally published with the amount in the lower-cloud column. The distinction between the upper and lower strata is carefully made in the United States Series and a portion of the Canadian Series, and the types are indicated by the above letters or their combinations in the proper column.

Albert J. Myer

Brig. Gen. (Bvt. Assg^{d},) Chief Signal Officer, U. S. A.

BULLETIN

OF

INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON FEBRUARY 10, 1877.

7:35 A. M. WASHINGTON mean time.

6:7 A. M. MEXICO mean time.
7:7 A. M. SAN JOSE mean time.
0:6 P. M. LISBON mean time.
0:28 P. M. MADRID mean time.
0:43 P. M. GREENWICH mean time.
0:53 P. M. PARIS mean time.
1:1 P. M. BRUSSELS mean time.
1:4 P. M. UTRECHT mean time.
1:13 P. M. BERNE mean time.

1:26 P. M. CHRISTIANIA mean time.
1:33 P. M. COPENHAGEN mean time.
1:33 P. M. ROME mean time.
1:37 P. M. BERLIN mean time.
1:49 P. M. VIENNA mean time.
1:55 P. M. STOCKHOLM mean time.
2:18 P. M. ATHENS mean time.
2:39 P. M. CONSTANTINOPLE mean time.
2:44 P. M. ST. PETERSBURG mean time.

10:2 P. M. TOKEI mean time.

ALGERIAN SERIES.

Furnished by the coöperation of General d'Eudeville, Commandant Supérieur du Génie in Algeria.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Nemours			30.°6	771.1	66.2	19.0		SSE			2		1			0	0	Clear	Michel.
Algiers			30.32	770.0	61.2	16.2		WSW			1		1			0	0	Clear	Biscarrat.
La Calle			30.26	768.6	57.2	14.0		NW			3		4			0.079	2.0	Fair	Fleury.
Tunis			30.23	767.7	55.4	13.0		W			3		6			0.079	2.0	Fair	Jacques.
Sfax																			
Saïda			30.32	770.1	60.8	16.0		NNE			1		1			0	0	Clear	Millot.
Tebessa			30.25	768.4	46.8	8.2		NNW			3		0			0	0	Clear	Bourgeois.
Geriville			30.25	768.4	41.0	5.0		SW			2		2			0	0	Clear	Lemaillot.
Laghouat			30.26	768.5	60.8	16.0		E			1		1			0	0	Clear	Guyot.
Biskra			30.28	769.2	53.6	12.0		NW			5		3			0	0	Fair	Kuntz.

NOTE.—In the originals the distinction between the amount of upper and lower clouds is apparently not made. The weather is published as given. The rain-fall is measured at 7 a. m., local time.

AUSTRIAN SERIES.

Furnished by the cooperation of Professor Dr. Julius Hann, Director of the Imperial and Royal Central Meteorological Institute at Vienna.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Agram			29.85	758.3	47.8	8.8	70	SW			3		7			0	0		Prof. Ivan Stozir.
Cracow, I. R. Observatory			29.69	754.1	37.0	2.8	86	W			2		10			0.382	9 7		Dr. Wierzbiski.
Eperies			29.74	755.3	39.2	4.0	73	S			2		10			0	0		Julius Mikolik.
Gratz	28.56	725 5	29.82	757.3	49.1	9.5	71	S			1		5			0.012	0.3		Andreas Rospini.
Hermannstadt	28.35	720.2	29.80	757.0	40.3	4.6	65	WNW			5		3			0	0		Prof. Reissenberger
Kremsmünster	28.47	723.2	29.83	757.6	46.0	7.8	67	W			6		10			0.228	5.8		Prof. C. Wagner.
Lemberg			29.67	753.5	33.6	0.9	85	NW			3		7			0.220	5.6		Dr. T. Stanecki.
Nyiregyhaza																			Habzsuda Daniel.
Pola			29.96	761.0	51.1	10.6	81	SW			0		10cs			0	0		I.R.Hydrographic Of'ce.
Szegedin			29.88	758.9	41.0	5.0	63	SW			1		10			0.020	0.50		Karl Stancel.
Trieste			29.99	761.8	46.9	8.3	82	Calm			0		10			0	0	Covered	Prof. V. Faroffi.
Vienna			29.74	755.4	47 5	8.6	70	W			6		9			0.180	3.3		I. R. Central Met. Obs,y.

No. ...—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 7 p. m., local time. The elevation of Gratz is 343.5 meters, or 1,126.9 feet; Hermannstadt, 407.8 meters, or 1,337.9 feet; Kremsmünster, 383.6 meters, or 1,258.5 feet.

BELGIAN SERIES.

Furnished by the cooperation of J. C. Houzeau, Director of the Royal Observatory at Brussels.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Arlon			29.99	761.7	43.9	6.6	96	SW			6		10			0.256	6.5	Raining	
Brussels			29.87	758.8	48.9	9.4	93	W			4		10n		WSW	0.299	7.60	Light rain	Royal Observatory.
Furnes			29.89	759.3	52.3	11.3	82	WSW			6		6			0.079	2.0		
Maeseyck			29.84	757.8	48.4	9.1	95	W			6		10			0.252	6.4	Raining	

NOTE.—In the originals, the weather is occasionally given in general notes.

BRITISH SERIES.

Furnished by the coöperation of Robert H. Scott, Esq., Director of the Meteorological Office, London, Alexander Buchan, Secretary of the Scottish Meteorological Society, Edinburgh, and the respective Observers.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Aberdeen			29.84	757.9	38.2	3.4		NW	12	5.4			4			0.48	12.19	Blue sky	William Boswell.
Ardrossan			29.83	757.7	44	6.7		NNW			2		7					*D. clouds	William McNeil.
Armagh, Observatory			29.88	758.9	48.9	9.4		SW	11	4.9			10					Gloomy	S. Call, for Dr. Robinson.
Bidston (Liverpool Obs.)			29.86	758.4	49.5	9.7		W	25	11.2			10					Overcast	John Hartnup.
Birr Castle, (Parsonstown)			29.96	761.0	51.3	10.7		SW			1		10					Overcast	J. Dreyer.
Bradford			29.80	756.9	50.1	10.1		NW			1		9			0.05	1.3	Overcast	J. McLandsborough.
Bridgetown, (Barbados)			30.03	762.7	79.0	26.1		NE			3		6					*D. clouds	Sergt. J. F. Halanen, A.
Cambridge, Observatory			29.88	758.9	53.0	11.7		W			3		10					Overcast	H. Todd. [H.C.
Cardington			29.90	759.4	56.0	13.3		W			2		8					Overcast	John McLaren.
Carlisle																			T. Bell, for J. Cartmell.
Chatham, School M. E.			30.01	762.2	53.2	11.8		Calm			0		2					Blue sky	Capt. Fellows, R. E.
Dartmoor	28.62	726.9	30.13	765.3	48.2	9.0		W			5		10					Gloomy	R. E. Power.
Davos Platz, (Switzerland)	24.83	d30.7			37.8	3.2	78	SE			2		3			0.68	2.1	*D. clouds	Francis Redford, M. A.
Donaghadee			29.84	757.9	49	9.4		W			3		10					Overcast	J. Mac Gowan.
Dover			29.90	759.4	52	11.1		W			3		9					Overcast	J. Costello.
Eccles, (near Manchester)			29.84	757.9	51.0	10.6		WNW	3.6	1.6			8					*D. clouds	Thomas Mackereth.
Falmouth, Observatory			30.12	765.0	54.7	12.6		W			5		3					*D. clouds	The Staff.
Fort Napier, (Natal)	27.35	694.7	29.58	751.3	89.8	32.1		E			2		0					Blue sky	P'vt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.94	760.5	87	30.6		N			1		1					*D. clouds	
Galway, Queen's College			30.06	763.5	46	7.8		W			4		10					Raining	Prof. A. H. Curtis.
Gibraltar, (Mediterranean)			30.31	769.9	64.3	17.9		W			3		2					*D. clouds	Corpl. C. Aitken, A.H.C.
Glasgow, Observatory			29.82	757.4	42.3	5.7		E			2		10					Threatening	Lewis Stuart.
Great Yarmouth			29.79	756.7	52	11.1		W			4		6					Hazy	G. T. Watson.
Greenwich, Royal Obs'y			29.94	760.5	52.0	11.1		W			4		10					Drizzling	The Staff, for G. B. Airy.
Guernsey			30.13	765.3	53.5	11.9		WSW			4		7					*D. clouds	Dr. S. E. Hoskins.
Helston			30.16	766.1	54	12.2		W			4		2c			0.3	7.6	Fine	M. P. Moyle.
Holyhead			29.89	759.2	51	10.6		WSW			3		10					Misty	John Tilston.
Kew, Observatory			29.94	760.5	52.5	11.4		W	15	6.7			10					Misty	The Staff.
Kingstown			29.91	759.7	52	11.1		WNW			5		10					Overcast	George Mitchell.
Leicester Museum			29.88	758.9	52.1	11.2		NW			2		10					Overcast	Wm. J. Harrison, F.G.S.
Malta, (Mediterranean)			30.13	765.3	60.0	15.6		NW			2		6k					*D. clouds	Corp'l. P. Bravis, A.H.C.
Nairn			29.85	758.2	38	3.3		Calm			0		10					Overcast	W. D. Penny.
Nassau, (Bahamas)			30.01	762.2	71.0	21.7		NW			4		4					*D. clouds	Surg. Maj. Henry.
Nottingham, Observatory			29.88	758.9	52.9	11.6		WNW			3		10d		WNW	0.02	0.7	Overcast	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			29.89	759.2	52.0	11.1		NW			3		9					Overcast	Rev. Stephen Whitty.
Oxford, Radcliffe Obs'y			30.03	762.7	51	10.6		SW			1		10					Raining	J. Lucas.
Plymouth			30.08	764.0	55	12.8		W			2		10					Overcast	John Merrifield.
Roche's Point			30.01	762.2	52	11.1		WSW			4		10					Overcast	W. Kennedy.
Saint Ann's Head			30.00	762.0	50	10.0		W			6		7					Misty	John C. Walker.
Saint Helier, (Jersey)			30.13	765.3	53.4	11.9		W			4		10					Overcast	A. P. Amy.
Sandwick Manse, (Orkneys)			29.85	758.2	34.0	1.1		N	17	7.6			4					*D. clouds	Rev. C. Clouston, LL. D.
Scarborough																			F. Shaw.
Scutari Cemetery, (Turkey)			29.91	759.7	45.0	7.2		SW			2		9					Gloomy	Sergt. W. H. Lyne.
Sheffield			29.84	757.9	50.7	10.4		WNW			4		6			0.07	2.0	*D. clouds	W. F. Cooper.
Silloth Rectory			29.85	758.2	48.7	9.3	86	SW			1		7			0.35	8.8	*D. clouds	Rev. Francis Redford
Stonyhurst, Observatory			29.84	757.9	49.6	9.4		NW					9					Blue sky	Rev. S. J. Perry.
Stornoway, Lews C., (Hebr.)			29.84	757.9	37	2.8		NE			2		10					Threatening	John Smith.
Stratfield Turgiss			29.96	761.0	51.7	10.9		W			3		10					Squally	Rev. Charles H. Griffith.
Thurso			29.81	757.2	38	3.3		N			4		7					*D. clouds	John Trotter.
Truro, Royal Institution			30.11	764.8	56	13.3		W			5		7					Gloomy	W. Newcombe.
Valencia, Observatory			29.97	761.2	51.8	11.0		SW	26	11.6			10					*D. clouds	The Staff.
SUB-SERIES.																			
Calf of Man, (Isle of Man)																			Henry Mercer.
Cape Good Hope, Obs'y			29.97	761.2	77.0	25.0	61	W	17	7.6		10	8						The Staff, for E. J. Stone.
Hobart Town, (Tasmania)			29.91	759.7	77.0	25.0	70	SE			1		0			0	0		Francis Abbott, F.R.A.S.
Leith, Restalrig Park			29.87	758.7	41.0	5.0		E			1		10k			0.36	9.1	Cloudy	Andrew Gibb.
Mauritius, Observatory			29.34	745.2				SW	22.5	10.1						5.43	137.9		C. Meldrum.
Melbourne, Observatory			30.04	763.0	74.2	23.4	76	W	3	1.3			10			0	0	Dull	R. L. J. Ellery.
Monach L't-house, (Hebrides)																			J. Youngclause.
North Unst, (Shetland Is.)			29.74	755.4	34	1.1		N			6	0	3			Blank	Blank		Robert Burnet.

NOTE.—Generally, the originals do not give the relative humidity, rain-fall, or distinction between upper and lower clouds. The originals give the wind direction to 32 points and weather by the Beaufort notation. The originals give the barometer for Aberdeen, Cardington, Freetown, Galway, Oxford, St. Helier, Sandwick, Scarborough, Stonyhurst, Leith, Monach and North Unst as read off and the amount of cloudiness for Stornoway by the scale 0 to 4. The wind-force is given by the scale 0 to 12 in the official series; 0 to 6 in the sub-series; except in lbs. per square foot for Greenwich and Hobart Town. The rain-fall is measured at Aberdeen at 10 a. m.; Bradford, 9 a. m.; Hobart Town, 7:30 a. m.; Nottingham, 6 p. m.; Mauritius, 9 a. m., local time. The elevation of Dartmoor is 1,400 feet, or 426.7 meters; Davos Platz, 5,1057 feet, or 1,556.02 meters; Fort Napier, 2,200 feet, or 670.6 meters. *Detached clouds.

By authority of the Minister of Foreign Affairs.

COSTA RICA SERIES.

Furnished by the coöperation of Senor Federico Maison, Director of the Central Office of Statistics and Meteorology.

San José																			

DANISH SERIES.

Furnished by the coöperation of Captain N. Hoffmeyer, Director of the Royal Danish Meteorological Institute at Copenhagen.

Copenhagen			29.47	748.6	33.6	0.9	94	W			2		10						
Fanöe			29.53	750.1	36.3	2.4	96	NW			2		6						
Godthaab, (Greenland)			29.65	753.2	15.1	— 9.4	78	NNE			4		2						
Stykkisholm, (Iceland)			29.90	759.4	21.0	— 6.1	93	E			6		0						
Thorshavn, (Faröe)			29.89	759.2	28.9	— 1.7	74	N			2		7						
Vestervig			29.53	750.1	34.5	1.4	82	N			4		3					Snowing	

NOTE.—The originals give the wind-force by the scale 0 to 6; occasionally, weather by Vienna symbols; no distinction between the amount of upper and lower clouds.

FRENCH SERIES.

Furnished by the co-operation of His Excellency, U. J. Le Verrier, Director of the Paris Observatory, and the respective Observers.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters	Weather.	Observer.
Alençon			30.22	767.5	48.2	9	85	WSW			3		5km		SSW	0	0	Cloudy	Normal School.
Amiens			30.00	762.0	56.5	13.6	91	SW			3		5		SW	0.079	2.0	Cloudy	Normal School.
Avignon			30.17	766.2	57.7	14.3	45	N			6		0			0	0	Clear	Normal School.
Bar-sur-Seine			30.13	765.4	49.6	9.8	83	SW			2		10		SW	0.035	0.9	Covered	C. Saillard.
Beaumette, (near Angers)			30.20	767.0	51.3	10.7	93	W	4.0	1.8					W	0	0		Beaumette Observ'tory.
Beauvais			30.08	764.0	52.7	11.5	71	W			3		10		W	0.043	1.10	Covered	Normal School.
Besançon			30.22	767.6	47.8	8.8	84	SSW			3		8		SW	0.138	3.5	Very cloudy	Normal School.
Bourg en Bresse			30.34	770.6	46.9	8.3	83	SW			2		10		N	0.047	1.2	Raining	Normal School.
Bourges			30.26	768.6	51.4	10.8	90	SW			6		5		W	0.035	0.9	Cloudy	Normal School.
Brest			30.15	765.9	54.1	12.3	83	W			4		10		W	0.049	1.25		Naval Observatory.
Carcassonne			30.30	769.7	54.0	12.2	54	W			1		5		E	0	0	Cloudy	Normal School.
Caen																			Normal School.
Chartres			30.08	764.1	51.8	11	90	W			4		8		SW	0	0		Normal School.
Châlons-sur-Marne			30.06	763.5	50.4	10.2	79	W			6		10n		E	0.063	1.6	Covered	Normal School.
Clermont			30.27	768.9	49.6	9.8	55	NW			2		10		NW	0	0		Puy de Dome Obs'y.
Commercy			30.14	765.5	48.0	8.9	84	W			6		8n		W	0.165	4.2	Very cloudy	Normal School.
Commune de Gréasque*			30.13	765.3	57.0	13.9	40	NW			4		2		NW	0	0		M. Kina.
Grenoble			30.24	768.0	50.7	10.4	61	NW			6		5km		NW	0	0	Cloudy	Normal School.
La Roche-sur-Yon			30.28	769.0	55.0	12.8	80	SW			2		5		NE	0.039	1.0	Cloudy	Normal School.
Le Mans			30.22	767.5	51.8	11	83	NNW			2		2		W	0	0	Slightly cl'dy	Normal School.
Lons-Le-Saulnier			30.26	768.6	46.6	8.1	91	S			2		5			0.256	6.50	Raining	Normal School.
Lorient			30.26	768.6	54.3	12.4	74	W			3		8		WNW	0.098	2.5	Very cloudy	Naval Observatory.
Mâcon			30.40	772.2	45.7	7.6	94	W			2		10			0.035	0.9	Covered	Normal School.
Metz			30.08	763.9	45.3	7.4	95	SW			4		10		SW	0.075	1.9	Storm	M. Schuster.
Mirecourt			30.10	764.6	47.8	8.8	97	SSW			2		10		E	0	0	Covered	Normal School.
Nismes			30.17	766.2	59.7	15.4	50	NE			6		0			0	0	Clear	Normal School.
Orleans			30.11	764.7	52.2	11.2	85	W			6		8		W	0	0	Very cloudy	Normal School.
Paris, Observatory			30.11	764.8	52.2	11.2	71	W			3		10k		W	0.026	0.66	Covered	National Observatory.
Parthenay																			Normal School.
Privas			30.24	768.2	50.5	10.3	39	WNW			4		5		WNW	0	0	Cloudy	Normal School.
Rochefort, Observatory			30.32	770.1	53.8	12.1	79	SW			4		10		NE			Raining	Naval Observatory.
Rouen			30.10	764.5	53.4	11.9	73	W			3		10		W	0.098	2.5	Covered	Normal School.
Saint Lo																			Normal School.
Tarbes	29.26	743.2	30.36	771.1	53.6	12	71	W			2		10			0	0	Covered	Normal School.
Villefranche			30.30	769.6	50.0	10	88	SW			3		8		NW	0.028	0.7	Very cloudy	Normal School.
Sub-Series.																			L'Abbé Marchési.
Fort de France, Martinique			29.88	758.9	75.6	24.2													Marseilles Observatory.
Marseilles			30.06	763.5	59.7	15.4	69	NNW			2		4			0	0	Partly cl'dy	—. Falguère.
Mont-Louis	25.00	634.9	30.31	769.9	46.4	8.0	26	NNW	9.3	4.17			2		NW	0	0		Montsouris Observatory
Montsouris, Paris			30.10	764.6	51.8	11.0	74	W			2		10		W	0.008	0.2		Dr. Fines.
Perpignan			30.25	768.4	57.0	13.9	53	NW	20.5	9.17			1		NW	0	0		M. Baylac.
Pic du Midi, (Summit,) H. P.																			General de Nansouty.
Pic du Midi, (Plantade,) H. P.	22.65	575.2			39.2	4.0		Calm			0		0			0	0	Clear	E. Renou.
Saint Maur, (near Paris)			30.11	764.7	51.8	11.0	75	WSW			3		10			0.055	1.4	Covered	Toulouse Observatory.
Toulouse			30.37	771.4	51.3	10.7	63	NW			1		10			0	0		C. Marquet.
Tours			30.21	767.2	53.2	11.8	76	WNW			1		6		W	0	0		Dr. A. Bérigny.
Versailles, (near Paris)			30.11	764.9	52.2	11.2	73	WNW			3		10			0.055	1.39	Covered	Mare Dechevrens, S. J.
Zi-Ka-Wei, (near Shanghai)			30.33	770.4	32.7	0.4	89	NNW	12.1	5.42			9			0.110	2.8	Rain & snow	

Note.—Generally, the originals give the wind-force by the scale 0 to 7; no distinction between upper and lower clouds, and, in the official series, the amount by the scale 0 to 4 the rain-fall as measured at 7, 8 or 9 a. m., local time; at Clermont, 9 a. m. of the following day; the weather in general terms as published. The elevation of Clermont is 388 meters, or 1,272.9 feet; Commune de Gréasque, 322 meters, or 1,056.4 feet; Tarbes, 308 meters, or 1,010 feet; Mont-Louis, 1,886.40 meters, or 6,294.8 feet; Pic du Midi, (Summit,) 2,877 meters, or 9,439.1 feet; Pic du Midi, (Plantade,) 2,366 meters, or 7,762.6 feet. In correcting the Mont-Louis barometric observations for altitude, the constant 135. millimeters has been added. *Bouches-du-Rhône

GERMAN SERIES.

Furnished by the coöperation of Professor Dr. G. Neumayer, Director of the German Naval Observatory, Hamburg.

Bamberg			29.84	757.8	45.5	7.5	82	W			6		10	W		0.079	2.0		Prof. T. Hoh.
Berlin			29.41	747.1	45.5	7.5	82	NW			5		10			0.551	14.0	Raining	Prof. Arndt.
Breslau			29.58	751.2	33.4	0.8	100	SSE			2		10			0.559	14.2	Rain & snow	Royal University Obs'y.
Carlsruhe			29.93	760.3	47.1	8.4	86	SW			5		10			0.126	3.2		A. Senz.
Cassel			29.68	753.8	49.1	9.5	84	W			8		10	W		0	0		Dr. H. Möhl.
Crefeld			29.76	756.0	49.6	9.8	89	W			6		9			0.16	4.		Director Lose.
Emden			29.71	754.6	41.7	5.4	84	NNW			4		5			0	0		Prof. Prestel.
Frankfort on the Main			29.89	759.1	47.3	8.5	88	W			4		10			0.087	2.2	Raining	Physical Society.
Friedrichshafen	28.63	727.3	30.09	764.3	47.3	8.5	71	W			7		10			0.075	1.9	Raining	M. Wilhelm.
Hamburg			29.43	747.4	44.2	6.8	91	WNW			6		10kn			0.705	17.9	Squally	Captain F. Hegemann.
Kiel			29.48	748.9	35.2	1.8	90	NE			3		10			0.311	7.9		Prof. G. Karsten.
Königsberg, (Prussia)			29.52	749.8	33.6	0.9	74	W			5		5			0.004	0.1		Prof. E. Luther.
Köslin			29.51	749.5	36.1	2.3		SW			2		10			0.106	2.7		H. Müller.
Leipsic			29.58	751.2	46.8	8.2	85	SW			5		10	WSW		0.110	2.8		Prof. Bruhns.
Memel			29.47	748.5	32.0	0.0	65	W			2		2cs			0.248	6.3		Reinbrecht & Skalweit.
Münster			29.69	754.2	49.1	9.5	93	SW			4		10			0.016	0.4		Prof. E. Heis.
Neufahrwasser			29.52	749.9	35.6	2.0	71	WSW			2		10	W		0	0		A Lothe.
Posen			29.52	749.9	35.4	1.9	89	S			2		10			0.087	2.2		Dr. Magener.
Strassburg, (in Alsace)			30.05	763.2	48.4	9.1	77	SW			4		10	SW		0.055	1.4		Dr. Schur.
Stuttgart			29.95	760.8	47.5	8.6	74	W			4		10			0.126	3.2	Raining	Prof. Schoder.
Thorn																			Dr. Hasenbalg.
Treves, (Trier)			29.86	758.4	48.2	9.0	87	W			6		10			0.091	2.3	Foggy	Prof. Flesch.
Weissenburg, (Bayaria)	28.35	720.2	29.88	759.0	43.9	6.6	84	W			7		10			0.673	17.1	Raining	Dr. von Bebber.
Wustrow, Naval School			29.52	749.8	34.3	1.3	95	ESE			3		10			0	0	Foggy	E. F. Schütz.
German Naval Series.																			

Note.—The elevation of Friedrichshafen is 413.4 meters, or 1,356.3 feet; Weissenburg, 431 meters, or 1,414.0 ft. In the originals the distinction between the amount of upper and lower clouds is not made. It is not always certain that the remarks in the weather column refer to the moment of observation.

GREEK SERIES.

Furnished by the coöperation of Professor Dr. J. F. Julius Schmidt, Director of the Royal Observatory at Athens.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Athens			30.05	763.3	59.7	15 4		W										Clear.	

Note.—The originals give the barometer corrected, but not reduced to sea-level; occasionally the kind of clouds; the weather as published. They omit the humidity, wind-force, amount of cloudiness and rain-fall.

ITALIAN SERIES.

Furnished by the coöperation of His Excellency the Minister of Agriculture, Industry and Commerce, and the respective Observers.

Udine			29.97	761.1	45.1	7.3	78	Calm	0	0			10			0	0		Prof. Giovanni Clodig.
Stelvio	22.07	560.6			26.6	— 3.0		NNE			4		2	SE		0.409	10.2		Signora Ernesta Manfredi.
Valdobbia	22.12	561.7			28.0	— 2.2	65	W			4		3	NW		0	0		Ab. Dom. Mongini.
Padua			29.95	760.8	46.4	8.0	83	SSE	1.3	0.6			10	SW		0	0		Prof. Dott. Lorenzoni.
Vicenza			29.96	760.9	46.9	8.3	78	E	0.7	0.3			9	W		0	0		Conte Alm. Da Schio.
Verona			29.97	761.1	46.9	8.3	77	E			1		10			0	0		Dott. B. Bertoncelli.
Bergamo	28.58	725.9	29.94	760.5	50.4	10.2	55	NW			4		3			0	0		Prof Trionfini Carlo.
Domodossola			29.93	760.2	58.6	14.8	29	S			6		2			0	0		Prof. Giuseppe Calza.
Milan			29.97	761.1	54.0	12.2	86	NW			1		4			0	0		Ab. Gio. Capelli
Pavia			29.95	760.8	54.1	12.3	67	SW			6		9	SW		0	0		Pr . Gio. Cantoni.
Moncalieri			29.90	761.8	48.7	9.3	62	ESE	0.7	0.3			8			0	0		Pro P. F. Denza.
Mondovi	28.04	712.3	30.02	762.4	56.7	13.7	45	SE			2		8	NW		0	0		Prof. D. C. Bruno.
Porto Maurizio			30.10	764.5	56.5	13.6	62	SW			2		5	NW		0	0		Prof. ... Vassallo.
Genoa			30.06	763.5	54.5	12.5	59	SW	3.1	1.4			10	S		0	0		Prof. G M. Garibaldi.
Piacenza			29.97	761.1	50.9	10.5	70	E	0.7	0.3			10			0	0		Dott. G. . anzi.
Parma			30.00	761.9	50.9	10.5	77	E			2		9			0	0		Prof. P. Pigorini.
Florence			30.09	764.3	51.8	11.0	84	WNW			2		10			0	0		Cav. F. Meucci.
Leghorn			30.07	763.8	55.6	13.1	57	S	6.8	3.1			10			0	0		Prof. P. Monte.
Siena	28.84	732.6	30.09	764.3	51.1	10.6	64	SW	0	0			10	W		0	0		Prof. L. Toscani.
Urbino	28.45	722.6	30.07	763.8	48.6	9.2	71	SSW			4		8			0	0		Prof. P. Serpieri.
Pesaro			29.98	761.5	54.9	12.7	65	SW	32.3	14.4			10	W		0	0		Prof. Luigi Guidi.
Ancona			30.00	762.0	54.0	12.2	60	W			2		2			0	0		Prof. F. De— Bosis.
Grosseto			30.10	764.5	53.8	12.1	79	SSE			2		8	SE		0	0		Avv. P. Ponticelli.
Rome			30.11	764.7	55.0	12.8	72	N	1.3	0.6			10			0	0		Prof's. P. Secchi & L. Respighi.
Naples, O. U.			30.11	764.7	60.4	15.8	71	S			2		9	WSW		0	0		Prof. L. Palmieri.
Lecce			30.11	764.7	55.0	12.8	66	WSW	9.3	4.2			1			0	0		Prof. C. De—Giorgi.
Cosenza			30.15	765.8	57.9	14.4	73	NW	0.7	0.3			5	SSW		0	0		Prof. F. D. Conti.
Cagliari			30.09	764.2	60.1	15.6	51	NW			6		7	NW		0	0		Prof. A. Pacinotti.
Ilposto, (Sicily)			30.05	763.3	59.4	15.2	62	E			2		7	W		0	0		Prof. F. Cafiero.
Palermo			30.08	764.1	57.9	14.4	64	NE	2.7	1.1			10			0	0		Prof. G. Cacciatore.
Caltanissetta	28.11	714.0	30.13	765.2	50.0	10.0	67	WNW			1		3	E		0	0		Prof. A. Pagani.
Siracusa			30.15	765.9	58.1	14.5	65	ESE			1		5	SW		0	0		Prof. V. Giuliano.
Sub-Series.																			
Naples, S. R.			30.12	765.1	55.2	12.9	67	WSW	1.3	0.6			10	WNW		0	0		Prof. F. Brioschi.

Note.—The originals give the wind-force by the scale 0 to 4, or the velocity in kilometers per hour; generally, no distinction between upper and lower clouds, occasionally the weather by the Vienna symbols. The elevation of Stelvio is 2,543.0 meters, or 8,342.9 feet; Valdobbia, 2,548.0 meters or 8,359.3 feet; Bergamo, 379.6 meters, or 1,24 3 feet; Mondovi, 556 meters, or 1,824.2 feet; Siena, 348.5 meters, or 1,143.3 feet; Urbino, 451 meters, or 1,479.7 feet; Caltanissetta, 570.3 meters, or 1,871.0 feet.

JAPANESE SERIES.

Furnished by the coöperation of the Imperial University of Tokei, Japan.

Tokei																			Prof. P. V. Veeder.

Note.—The originals give the amount of cloudiness by the scale 0 to 4 without distinguishing between upper and lower clouds. The rain-fall is measured at 7 a. m., cal time

MEXICAN SERIES.

By authority of the Secretary of Public Works.

Furnished by the coöperation of Senor Mariano Barcena, Director of the Central Meteorological Observatory in the City of Mexico.

Mexico																			Mariano Barcena. Vicente Reyes. Miguel Perez. (Engineers in charge.)

Note.—The elevation of Mexico is 2,290 meters, or 7,512.9 feet. The rain-fall is measured at 6 a. m., local time.

NETHERLANDS' SERIES.

Furnished by the cooperation of Professor Buys Ballot, Director of the Royal Meteorological Institute of the Netherlands at Utrecht.

Flushing			29.88	758.9	48.2	9.0		WNW			5					0.028	0.7		
Groningen			29.58	751.2	44.6	7.0										0.189	4.8		
Helder			29.71	754.7	45.1	7.3		WNW			6					0.075	1.9		
Utrecht			29.72	754.9	50.7	10.4	83	WNW			6		8			0.063	1.6	Very cloudy	

Note.—The originals give the wind-pressure in kilograms per square meter; for Utrecht, they give the weather as published, from which the amount of cloudiness is taken by the scale 0 to 4, without distinguishing between upper and lower clouds. It is assumed that the barometer readings have been reduced to sea-level.

NORWEGIAN SERIES.

Furnished by the cooperation of Professor H. Mohn, Director of the Royal Norwegian Meteorological Institute at Christiania.

Bergen			29.61	752.2	30.2	— 1.0	92	WNW	2.7	1.2			10			0.008	0.2		
Brönö			29.34	745.3	26.8	— 2.9	94	E	8.9	4			10					Snowing	
Christiania			29.52	749.7	23.7	— 4.7	74	Calm	0	0			2			0	0	Light fog	
Tromsö			29.37	746.1	20.5	— 6.4	66	WSW	11.2	5			2			0	0		

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols. The cloudiness and weather at Bergen refer to 2h., p. m., local time, instead of 1h., 4 min.

PORTUGUESE SERIES.

Furnished by the coöperation of J. C. de Brito Capello, Director of the Meteorological Observatory of the Infante Don Luiz at Lisbon.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Angra, (Azores)	.....	.....	30.22	767.6	61.5	16.4	87	SSW	4.3	1.9	.....	.....	4	.....	.....	0.039	1.0	.....	Dr. J. A. Sampaio.
Campo Major	.....	.....	30.34	770.5	53.8	12.1	70	WNW	4.3	1.9	.....	.....	3	.....	.....	0	0	.....	Dr. A. M. R. dos Santos.
Funchal, (Madeira)	.....	.....	30.41	772.4	65.5	18.6	64	SE	3.1	1.4	.....	.....	0	.....	.....	0	0	.....	Capt. D. A. de Cunha.
Lisbon	.....	.....	30.39	771.9	56.8	13.8	63	S	6.3	2.8	.....	.....	7	.....	.....	0	0	.....	The Observatory.
Ponta Delgada, (Azores)	.....	.....	30.26	768.7	61.5	16.4	94	SSW	3.8	1.7	.....	.....	10	.....	.....	0	0	.....	
.....																			

Note.—The originals give the wind-velocity in kilometers per hour; occasionally, the weather by the Vienna symbols; the amount of cloudiness without distinguishing between upper and lower clouds; the barometer corrected but not reduced to sea-level. The rain-fall at Lisbon is measured at noon, instead of 0 h. 6 m., p. m.

RUSSIAN SERIES.

Furnished by the coöperation of Professor H. Wild, Director of the Imperial Central Physical Observatory of Russia, at St. Petersburg.

Warsaw	.....	.....	29.61	752.1	33.4	0.8	87	SW	9	4	.....	.....	10	.....	.....	.....	.....	.....	Astronomical Obs.
Wilna	.....	.....	29.47	748.5	28.6	— 1.9	79	NW	2	1	.....	.....	10	.....	.....	.....	.....	.....	Astronomical Obs.
Dorpat	.....	.....	29.40	746.8	21.7	— 5.7	92	NW	2	1	.....	.....	10	.....	.....	.....	.....	.....	Physical Cabinet.
St. Petersburg	.....	.....	29.47	748.4	16.7	— 8.5	92	ESE	11	5	.....	.....	10	.....	.....	.....	.....	Snowing.....	Central Physical Obs.
Kuopio	.....	.....	30.55	760.6	7.2	—13.8	100	ENE	13	6	.....	.....	10	.....	.....	.....	.....	Snowing.....	Ch. Forsten.
Kieff	.....	.....	29.45	748.0	32.9	0.5	87	NW	18	8	.....	.....	10	.....	.....	.....	.....	.....	Physical Cabinet.
Nikolaiev	.....	.....	29.59	751.5	36.9	2.7	67	NW	27	12	.....	.....	4	.....	.....	.....	.....	.....	Kurdakof.
Kertch	.....	.....	29.47	748.6	35.6	2.0	96	SSW	9	4	.....	.....	10	.....	.....	.....	.....	.....	Lagorio.
Moscow	.....	.....	29.76	755.8	1.2	—17.1	79	SSE	11	5	.....	.....	10	.....	.....	.....	.....	Light snow..	Meteorological Obs.
Lugan	.....	.....	29.52	749.9	20.5	— 6.4	76	ENE	4	2	.....	.....	10	.....	.....	.....	.....	.....	Meteorological Obs.
Archangel	.....	.....	30.00	762.1	—13.0	—25.0	81	SE	27	12	.....	.....	1	.....	.....	.....	.....	.....	Ogorodnikof.
Tiflis	28.49	723.6	29.94	760.5	40.1	4.5	47	NE	13	6	.....	.....	5	.....	.....	.....	.....	.....	Physical Observatory.
Astrakhan	.....	.....	29.85	758.3	30.7	— 0.7	79	SSW	2	1	.....	.....	10	.....	.....	.....	.....	.....	Sebastianof.
Kasan	.....	.....	29.97	761.1	— 7.4	—21.9	83	NE	2	1	.....	.....	10	.....	.....	.....	.....	Light snow..	Physical Cabinet.
Orenburg	.....	.....	30.00	777.3	— 1.3	—18.5	67	E	16	7	.....	.....	3	.....	.....	.....	.....	.....	Tschernischef.
Ekaterinburg	29.17	741.0	30.28	769.0	—17.7	—27.6	76	Calm	0	0	.....	.....	0	.....	.....	.....	.....	.....	Meteorogical Obs.
Nukuss	.....	.....	29.80	756.8	40.6	4.8	68	N	4	2	.....	.....	0	.....	.....	.....	.....	.....	
Kasaly	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Bobrof.
Tashkend	28.50	718.7	30.06	763.5	37.8	3.2	78	NW	4	2	.....	.....	10	.....	.....	.....	.....	.....	Michelson.
Barnaul	.....	.....	30.43	772.9	— 0.4	—18.0	73	NE	0	0	.....	.....	1	.....	.....	.....	.....	.....	Meteorological Obs.
Yenisei	.....	.....	30.51	774.9	— 9.9	—23.3	68	Calm	0	0	.....	.....	0	.....	.....	.....	.....	.....	Marks.
Irkutsk	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Usolzef.
Peking, (China)	.....	.....	30.42	772.7	18.7	— 7.4	69	Calm	0	0	.....	.....	0	.....	.....	.....	.....	.....	Physical Observatory.
Nertchinsk	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Meteorological Obs.
Vladivostock	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Nikolaievsk, on the Amoor	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols; they omit the rain-fall. The elevation of Tiflis is 409 meters, or 1,341.8 feet; Ekaterinburg, 306.4? m., or 1,005.2? ft.; Tashkend, 494.2? m., or 1,621.3? ft.; Irkutsk, 392 m., or 1,286 ft.; Nertchinsk, 592.0? m., or 1,942.2? ft.

SPANISH SERIES.

Furnished by the coöperation of Antonio Aguilar, Director of the Royal Observatory at Madrid, and of Don Cecilio Pujazon, Captain R. N. Director of the Naval Observatory at San Fernando.

Madrid	.....	.....	30.31	769.8	54.1	12.3	58	N	0.8	0.34	.....	0	0	.....	.....	0	0	Clear	Royal Observatory.
San Fernando	.....	.....	30.38	771.7	58.8	14.9	82	W	6.5	2.9	.....	3	6	W	W	.....	.....	.....	Naval Observatory.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

Note.—The originals give the weather in general terms, as published; rain-fall for San Fernando from preceding to following midnight; wind-velocity for Madrid in kilometers per hour.

SWEDISH SERIES.

Furnished by the coöperation of Professor R. Rubenson, Director of the Royal Swedish Meteorological Institute, at Stockholm, and of Dr. H. H. Hildebrandsson, Chief of the Meteorological Division of the Upsala Observatory.

Haparanda	.....	.....	29.61	752.0	28.4	— 2.0	100	S	.....	.....	2	.....	6	.....	.....	0	0	.....	
Umea	.....	.....	29.50	749.2	16.9	— 8.4	94	N	.....	.....	2	.....	10	.....	.....	0	0	.....	
Hernosand	.....	.....	29.46	748.3	19.4	— 7.0	100	NE	.....	.....	2	.....	10	.....	.....	0.173	4.4	.....	
Stockholm	.....	.....	29.35	745.0	22.1	— 5.5	85	NW	.....	.....	2	.....	10	.....	.....	0	0	.....	
Wisby	.....	.....	29.43	747.5	29.8	— 1.2	88	NW	.....	.....	4	.....	0	.....	.....	0	0	.....	
Sub-Series.																			
Upsala	.....	.....	29.39	746.4	21.9	— 5.6	92	NNW	11.9	5.3	.....	.....	10	.....	.....	0.000	0.01	.....	Dr. Hildebrandsson.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

Note.—The originals give the wind-force by the scale 0 to 6, and Upsala also velocity in meters per second; occasionally, the weather by the Vienna symbols, or in general terms; no distinction between the amount of upper and lower clouds. The rain-fall is measured at 8 a. m., local time.

SWISS SERIES.

Furnished by the coöperation of Professor R. Wolf, Director of the Observatory at Zurich, and of Professor E. Plantamour, Director of the Observatory at Geneva.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Geneva	28.78	731.1	30.22	767.6	50.2	10.1	60	SSW	.....	.....	2	.....	9	.....	.....	0.028	0.7	Cloudy	The Observatory.
Zurich	28.46	722.9	30.12	765.1	47.5	8.6	65	W	.....	.....	4	.....	10	.....	.....	0	0	Covered	The Observatory.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Note.—For Geneva the corresponding departures from the normal values are: Barometer, +4.6 mm; Thermometer, +7.0 cent.; Relative Humidity, —13 per cent.

Note.—The rain-fall is measured at Zurich at 7 a. m. on the following day. The originals give the barometer corrected but not reduced to sea-level; the wind-force by the scale 0 to 4 for Zurich; the amount of cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The elevation of Geneva is 408 meters, or 1,339 feet, and that of Zurich 470 meters, or 1,542 feet.

TURKISH SERIES.

Furnished by the coöperation of A. Coumbary, Effendi, Director of the Central Observatory at Constantinople, and of Professor C. V. A. Van Dyck, Superintendent of the Lee Observatory at Beirut.

Constantinople	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Fao, (Persian Gulf)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Salonica	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Valona	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Varna	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y	.....	.....	30.09	764.2	54.7	12.6	91	ENE	.....	.....	1	.....	8n	.....	SW	0.61	15.5	Raining	Prof. C. V. A. Van Dyck.

Note.—The originals give the wind-force by the scale 0 to 7, (except Beirut, by the scale 0 to 12, and Constantinople velocity in meters per second;) the weather in general terms as published; no distinction between upper and lower clouds, and, except Constantinople and Beirut, the amount by the scale 0 to 4. It is assumed that the barometer is reduced to sea-level.

CANADIAN SERIES.

Furnished by the coöperation of Professor G. T. Kingston, Director of the Magnetic Observatory at Toronto, and Superintendent of the Meteorological Office of the Dominion of Canada, and the respective Observers. Those marked with a star (*) are also telegraphed daily to the office of the Chief Signal Officer, U. S. Army.

Bathurst, N. B	.....	.....	29.97	761.2	— 3.5	—15.8	82	Calm	0	0	.....	.....	0	.....	.....	.....	.....	.....	Hon. J. Ferguson.
Brockville, Ontario	.....	.....	.....	.....	.....	.....	.....	SW	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	W. R. Bigg.
*Chatham, N. B	.....	.....	30.10	764.5	— 5	—20.6	100	SW	2	0.9	.....	8c	0	W	.....	0	0	Fair	G. A. Blair.
Charlottetown, P. E. Island	.....	.....	30.08	764.0	12	—11.1	88	Calm	0	0	.....	.....	10s	.....	.....	Inap.	Inap.	Cloudy.....	H. J. Cundall, C. E.
Cornwall, Ontario	.....	.....	29.81	757.2	21.8	— 5.7	87	W	.....	.....	1	0	7k	.....	.....	0	0	Fair	James Smith, M. A.
Dalhousie, N. B	.....	.....	30.08	764.0	6.7	—14.1	96	W	.....	.....	1	.....	.....	.....	.....	0	0	Clear	H. A. Johnson.
Esquimault, B. C	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	W. H. Bevis.
*Father Point, Quebec	.....	.....	30.08	764.0	15	— 9.4	79	SE	3	1.3	.....	.....	10n	.....	.....	0	0	Cloudy	J. McWilliams.
Fredericton, N. B	.....	.....	30.19	766.8	— 5.9	—21.1	100	Calm	0	0	.....	.....	Haze	.....	.....	0	0	Cloudy.....	Prof. Harrison.
*Fort Garry, Manitoba	.....	.....	29.96	761.0	20	— 6.7	98	NE	15	6.7	.....	5k	5ks	NE	NE	0	0	Cloudy.....	James Stewart.
Goderich, Ontario	.....	.....	30.10	764.5	25.9	— 3.4	85	SW	.....	.....	2	4k	0	.....	.....	0	0	Fair	H. J. Strang, M. A
Granton, Ontario	28.94	735.1	30.11	764.8	25.2	— 3.8	.....	SW	.....	.....	1	1cs	0	.....	.....	0	0	Clear.....	James Grant.
*Halifax, N. S	.....	.....	30.09	764.3	18	— 7.8	87	NW	6	2.7	.....	0	0	.....	.....	Inap	Inap	Clear.....	F. Allison, M. A.
Hamilton, Ontario	.....	.....	30.13	765.3	26.7	— 2.9	82	SW	.....	.....	1	8ck	0	.....	.....	0	0	Bright.....	G. Dickson.
Heart's Content, N. F	.....	.....	29.67	753.6	23	— 5.0	100	NW	.....	.....	3	.....	10	.....	.....	0	0	Overcast.....	E. Weedon.
*Kingston, Ontario	.....	.....	30.14	765.5	24	— 4.4	89	SW	3	1.3	.....	8ck	0	SW	.....	0	0	Fair	S. Woods, M. A.
*Montreal, Quebec	.....	.....	30.08	764.0	17	— 8.3	85	SW	16	7.2	.....	5cs	Haze	SW	.....	0	0	Fair.....	C. H. McLeod, C. E
*Ottawa, Ontario	.....	.....	30.07	763.8	17	— 8.3	75	S	2	0.9	.....	5ck	2s	W	S	0	0	Fair.....	J. B. Haney.
*Parry Sound, Ontario	.....	.....	30.02	762.5	24	— 4.4	81	S	4	1.8	.....	2cs	2ks	W	W	0	0	Fair.....	Rev. R. Mosley.
Port Dover, Ontario	.....	.....	30.16	766.1	20	— 6.7	89	SW	6	2.7	.....	5k	0	NW	.....	0	0	Fair	H. Morgan.
Port Hastings, N. S	.....	.....	30.21	767.3	18.3	— 7.6	.....	NW	8	3.6	.....	.....	.....	.....	.....	0	0	Fine.....	Peter Grant.
Port Stanley, Ontario	.....	.....	30.17	766.3	16	— 8.9	96	SE	1	0.4	.....	5ck	0	W	.....	0	0	Fair	M. Payne.
*Quebec, Quebec	.....	.....	30.10	764.5	17	— 8.3	83	Calm	0	0	.....	.....	10n	.....	.....	0.05	1.3	Light snow..	Capt. Ashe, R. N.
*Rockliffe, Ontario	.....	.....	29.98	761.5	23	— 5.0	77	E	2	0.9	.....	.....	8s	.....	NW	0	0	Cloudy.....	
St. John, N. B	.....	.....	30.20	767.1	11	—11.7	80	Calm	0	0	.....	5ck	0	.....	.....	0	0	Fair	G. Murdoch, C. E.
*Saugeen, Ontario	.....	.....	30.01	762.2	30	— 1.1	89	SW	5	2.2	.....	2cs	0	.....	.....	0	0	Clear	K. Stewart.
Stayner, Ontario	.....	.....	30.01	762.2	31	— 0.6	69	W	5	2.2	.....	2ck	0	W	.....	0	0	Fair	R. J. Cole.
Stratford, Ontario	28.75	730.2	30.10	764.5	24.0	— 4.4	86	SW	10	4.5	.....	.....	10s	.....	.....	0	0	Cloudy.....	C. J. MacGregor, M. A.
*Sydney, C. B	.....	.....	30.00	762.0	16	— 8.9	78	NW	6	2.7	.....	2k	0	.....	.....	0	0	Clear	T. C. Hill.
*Toronto, Ontario	.....	.....	30.10	764.5	28	— 2.2	73	SW	12	5.4	.....	5ck	5s	W	W	0	0	Cloudy.....	Magnetic Observatory.
Woodstock, Ontario	.....	.....	30.12	765.0	24.6	— 4.1	90	W	12	5.4	.....	.....	8ks	.....	.....	0	0	Cloudy	J. Montgomery.
Sub-Series.																			
St. Johns, Newfoundland	.....	.....	29.72	754.9	24.5	— 4.2	.....	N	.....	.....	.....	.....	.....	.....	.....	.....	.....	Fair.....	John Delany
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Note.—The originals for Brockville, Charlottetown, Port Dover, Port Stanley, Stayner, St. Johns, N. F. and those telegraphed, give the amount of cloudiness by the scale 0 to 4. The elevation of Granton is 1,015 feet, or 309.4 m.; Stratford, 1,182 feet, or 360.3 m

UNITED STATES SERIES.

Furnished by the coöperation of Bvt. Brig. Gen. Albert J. Myer, Chief Signal Officer, U. S. Army.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather	Observer.
Albany, N. Y.	.....	.....	30.13	765.3	17	— 8.3	67	Calm	0	0	.....	2cs	Haze	.....	.....	0	0	Fair	
Alpena, Mich.	.....	.....	30.00	762.0	27	— 2.8	77	SW	5	2.2	.....	2ck	0	W	.....	0	0	Fair	
Atlantic City, N. J.	.....	.....	30.20	767.1	31	— 0.6	89	N	6	2.7	.....	0	0	.....	.....	0	0	Clear	
Augusta, Ga.	.....	.....	30.17	766.3	42	5.6	74	NW	3	1.3	.....	5k	0	NW	.....	0	0	Fair	
Baltimore, Md.	.....	.....	30.23	767.8	30	— 1.1	68	NE	2	0.9	.....	Haze	Sm'c	.....	.....	0	0	Fair	
Barnegat, N. J.	.....	.....	30.20	767.1	35	1.7	57	E	11	4.9	.....	0	0	.....	.....	0	0	Clear	
Bismarck, Dakota	28.04	712.2	29.74	755.4	23	— 5.0	74	Calm	0	0	.....	0	0s	.....	.....	0	0	Fair	
Boston, Mass.	.....	.....	30.21	767.3	20	— 6.7	77	W	4	1.8	.....	1cs	Sm'c	.....	.....	0	0	Clear	
Breckenridge, Minn.	.....	.....	29.79	756.7	15	— 9.4	83	E	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Buffalo, N. Y.	.....	.....	30.12	765.0	25.0	— 3.9	87	W	5	2.2	.....	5k	1s	W	.....	0	0	Fair	
Burlington, Vt.	.....	.....	30.15	765.8	21	— 6.1	62	S	7	3.1	.....	0	8s	.....	.....	0	0	Cloudy	
Cairo, Ill.	.....	.....	30.21	767.3	33	0.6	89	Calm	0	0	.....	Haze	Fog	.....	.....	0	0	Foggy	
Cape Hatteras, N. C.	.....	.....	29.98	761.5	43	6.1	83	NE	20	8.9	.....	8cs	0	SW	.....	0	0	Cloudy	
Cape Henry, Va.	.....	.....	30.16	766.1	38	3.3	72	NE	24	10.7	.....	0	0	.....	.....	0	0	Clear	
Cape Lookout, N. C.	.....	.....	30.06	763.5	40	4.4	91	NE	14	6.3	.....	.....	10s	.....	NE	0	0	Cloudy	
Cape May, N. J.	.....	.....	30.20	767.1	27	— 2.8	77	NE	8	3.6	.....	0	0	.....	.....	0	0	Clear	
Charleston, S. C.	.....	.....	30.11	764.8	40	4.4	56	N	10	4.5	.....	0	1s	.....	.....	0	0	Clear	
Cheyenne, Wyoming	23.87	606.3	29.81	757.2	33	0.6	32	W	8	3.6	.....	0	0	.....	.....	0	0	Clear	
Chicago, Ill.	.....	.....	30.10	764.5	32	0.0	79	SW	10	4.5	.....	.....	10s	.....	.....	0	0	Cloudy	
Cincinnati, Ohio	.....	.....	30.13	765.3	32	0.0	79	NW	1	0.4	.....	.....	Fog	.....	.....	0	0	Foggy	
Cleveland, Ohio	.....	.....	30.16	766.1	25	— 3.9	88	SE	8	3.6	.....	Haze	2s	.....	.....	0	0	Fair	
Corsicana, Tex.	.....	.....	30.23	767.8	37	2.8	90	N	2	0.9	.....	0	0	.....	.....	0	0	Clear	
Davenport, Iowa	.....	.....	30.10	764.5	32	0.0	89	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Denison, Tex.	.....	.....	30.22	767.6	38	3.3	71	W	3	1.3	.....	0	Sm'c	.....	.....	0	0	Clear	
Denver, Col.	24.65	626.1	29.87	758.7	27	— 2.8	65	S	5	2.2	.....	0	0	.....	.....	0	0	Clear	
Detroit, Mich.	.....	.....	30.10	764.5	26	— 3.3	76	S	6	2.7	.....	0	5s	.....	.....	0	0	Fair	
Dodge City, Kan.	27.39	695.7	29.78	756.4	27	— 2.8	88	SW	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Dubuque, Iowa	.....	.....	30.05	763.3	32	0.0	79	Calm	0	0	.....	0	Haz.	.....	.....	0	0	Clear	
Duluth, Minn.	.....	.....	29.83	757.7	31	— 0.6	78	Calm	0	0	.....	5c	0	.....	.....	0	0	Fair	
Eastport, Me.	.....	.....	30.15	765.8	18	— 7.8	68	W	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Erie, Pa.	.....	.....	30.14	765.5	25	— 3.9	88	SE	6	2.7	.....	2ck	Fog	W	.....	0	0	Fair	
Escanaba, Mich.	.....	.....	29.93	760.2	27	— 2.8	82	SW	14	6.3	.....	2cs	Fog	.....	.....	0	0	Fair	
Fort Gibson, Indian Ter.	.....	.....	30.18	766.6	28	— 2.2	88	E	1	0.4	.....	0	0	.....	.....	0	0	Clear	
Ft. St. Michael, Alaska	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Fort Sill, Indian Ter.	28.96	735.6	30.12	765.0	35	1.7	45	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Fort Sully, Dakota	28.05	712.5	29.76	755.9	25	— 3.9	75	NW	2	0.9	.....	0	0	.....	.....	0	0	Clear	
Florence, Arizona	28.34	719.8	29.83	757.7	59	15.0	.....	SW	.....	.....	.....	.....	10s	.....	SW	0	0	Cloudy	
Galveston, Tex.	.....	.....	30.24	768.1	48	8.9	70	NE	12	5.4	.....	0	0	.....	.....	0	0	Clear	
Grand Haven, Mich.	.....	.....	30.05	763.3	34	1.1	95	S	4	1.8	.....	.....	Fog	.....	.....	0	0	Foggy	
Indianapolis, Ind.	.....	.....	30.17	766.3	32	0.0	79	Calm	0	0	.....	0	Fog	.....	.....	0	0	Foggy	
Indianola, Tex.	.....	.....	30.24	768.1	51	10.6	86	N	12	5.4	.....	0	0	.....	.....	0	0	Clear	
Jacksonville, Fla.	.....	.....	30.03	762.7	52	11.1	72	NE	3	1.3	.....	8k	0	NW	.....	0	0	Cloudy	
Keokuk, Iowa	.....	.....	30.07	763.8	35	1.7	80	SW	9	4.0	.....	0	0	.....	.....	0	0	Clear	
Key West, Fla.	.....	.....	30.05	763.3	62	16.7	83	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Kittyhawk, N. C.	.....	.....	30.11	764.8	40	4.4	82	NE	30	13.4	.....	5c	0	W	.....	0.12	3.0	Fair	
Knoxville, Tenn.	.....	.....	30.12	765.0	42	5.6	83	NE	2	0.9	.....	.....	10ks	.....	W	0	0	Cloudy	
La Crosse, Wis.	.....	.....	29.97	761.2	33	0.6	69	S	15	6.7	.....	0	0	.....	.....	0	0	Clear	
Leavenworth, Kan.	.....	.....	30.11	764.8	32	0.0	89	S	6	2.7	.....	0	0	.....	.....	0	0	Clear	
Louisville, Ky.	.....	.....	30.18	766.6	31	— 0.6	79	Calm	0	0	.....	0	Sm'c	.....	.....	0	0	Clear	
Lynchburg, Va.	.....	.....	30.22	767.6	31	— 0.6	79	Calm	0	0	.....	0	0	.....	.....	0	0	Clea	
Malone, N. Y.	.....	.....	30.04	763.0	25	— 3.9	75	S	8	3.6	.....	5k	0	W	.....	0	0	Fair	
Marquette, Mich.	.....	.....	29.85	758.2	35	1.7	70	SE	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Memphis, Tenn.	.....	.....	30.22	767.6	38	3.3	80	N	2	0.9	.....	0	Fg'sm'	.....	N	0	0	Clear	
Milwaukee, Wis.	.....	.....	30.07	763.8	31	— 0.6	69	W	8	3.6	.....	10s	Sm'c	W	.....	0	0	Cloudy	
Mobile Ala.	.....	.....	30.16	766.1	45	7.2	76	NW	6	2.7	.....	0	Fog	.....	.....	Inap.	Inap.	Clear	
Montgomery, Ala.	.....	.....	30.13	765.3	46	7.8	68	NW	3	1.3	.....	0	Haze	.....	.....	Inap.	Inap.	Clear	
Morgantown, W. Va.	29.05	737.9	30.16	766.1	28.5	— 1.9	77	NW	1	0.4	.....	0	Haze	.....	.....	0	0	Clear	
Mt. Washington, N. H.	23.55	598.2	29.91	759.7	4	—15.6	74	NW	36	16.1	.....	2c	0	NW	.....	0	0	Fair	
Nashville, Tenn.	.....	.....	30.17	766.3	32	0.0	89	Calm	0	0	.....	0	Fog	.....	.....	0	0	Clear	
New Haven, Conn.	.....	.....	30.21	767.3	32	0.0	69	N	5	2.2	.....	Haz.	0	.....	.....	0	0	Clear	
New London, Conn.	.....	.....	30.22	767.6	25	— 3.9	75	N	4	1.8	.....	0	0	.....	.....	0	0	Clear	
New Orleans, La.	.....	.....	30.16	766.1	61.5	10.8	62	N	6	2.7	.....	0	Sm'c	.....	N	0	0	Clear	
Newport, R. I.	.....	.....	30.21	767.3	27	— 2.8	67	N	4	1.8	.....	0	0	.....	.....	0	0	Clear	
New York, N. Y.	.....	.....	30.22	767.6	31	— 0.6	79	NE	6	2.7	.....	Haz.	Fog	NE.	.....	0	0	Foggy	
Norfolk, Va.	.....	.....	30.16	766.1	35	1.7	70	N	11	4.9	.....	0	Haze	.....	.....	0	0	Clear	
North Platte, Neb.	26.93	684.0	29.59	751.6	24	— 4.4	86	W	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Omaha, Neb.	28.81	731.8	29.92	760.0	33	0.6	79	S	8	3.6	.....	0	0	.....	.....	0	0	Clear	
Oswego, N. Y.	.....	.....	30.13	765.3	22.5	— 5.3	78	Calm	0	0	.....	2ck	2s	NW	.....	0	0	Fair	
Pembina, Dakota	.....	.....	29.93	760.2	17	— 8.3	83	NW	8	3.6	.....	2cs	5s	.....	.....	0	0	Fair	
Philadelphia, Pa.	.....	.....	30.23	767.8	30	— 1.1	68	E	6	2.7	.....	0	Sm'c	.....	.....	0	0	Clear	
Pike's Peak, Col.	17.62	447.5	29.83	757.7	8	—13.3	33	S	16	7.2	.....	0	0	.....	.....	0	0	Clear	
Pittsburgh, Pa.	.....	.....	30.15	765.8	26	— 3.3	88	N	4	1.8	.....	.....	Fog	.....	.....	0	0	Foggy	
Port Huron, Mich.	.....	.....	30.08	764.0	25	— 3.9	87	SW	12	5.4	.....	0	5s	W	.....	0	0	Fair	
Portland, Me.	.....	.....	30.17	766.3	22	— 5.6	72	Calm	0	0	.....	1k	Haze	NW	.....	0	0	Clear	
Portland, Oregon	.....	.....	30.27	768.8	30	— 1.1	89	Calm	0	0	.....	0	5s	.....	.....	0.06	1.5	Fair	
Punta Rassa, Fla.	.....	.....	30.04	763.0	62.0	16.7	88	N	7	3.1	.....	2k	5ks	SW	SW	0	0	Fair	
Rochester, N. Y.	.....	.....	30.10	764.5	25	— 3.9	83	SW	7	3.1	.....	8ck	Haz.	NW	.....	0	0	Fair	
Salt Lake City, Utah	25.60	647.7	29.83	757.7	17	— 8.3	100	NW	4	1.8	.....	.....	Fog	.....	.....	0	0	Foggy	
Sandy Hook, N. J.	.....	.....	30.18	766.6	31	— 0.6	68	NE	7	3.1	.....	0	0	.....	.....	0	0	Clear	
San Diego, Cal.	.....	.....	29.80	756.9	55	12.8	48	SE	6	2.7	.....	.....	10s	.....	SE	0	0	Cloudy	
San Francisco, Cal.	.....	.....	29.91	759.7	49	9.4	71	W	8	3.6	.....	0	0	.....	.....	0	0	Clear	
Santa Fé, N. M.	23.18	588.8	29.72	754.9	22	— 5.6	56	N	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Savannah, Ga.	.....	.....	30.10	764.5	42	5.6	65	NE	10	4.5	.....	5ck	2s	SW	N	0	0	Fair	
Shreveport, La.	.....	.....	30.27	768.8	39	3.9	91	Calm	0	0	.....	0	Sm'c	.....	.....	0	0	Clear	
Smithville, N. C.	.....	.....	30.08	764.0	33	0.6	79	N	10	4.5	.....	1ck	1as	W	N	0	0	Fair	
Springfield, Mass.	.....	.....	30.24	768.1	19	— 7.2	68	NW	1	0.4	.....	0	0	.....	.....	0	0	Clear	
St. Louis, Mo.	.....	.....	30.20	767.1	37	2.8	81	NW	3	1.3	.....	.....	Fog	.....	.....	0	0	Foggy	
St. Marks, Fla.	.....	.....	30.05	763.3	49	9.4	93	N	8	3.6	.....	.....	10s	.....	N	0.10	2.5	Cloudy	
St. Paul, Minn.	.....	.....	29.82	757.4	30	— 1.1	89	SE	7	3.1	.....	0	0	.....	.....	0	0	Clear	
St. Paul's Island, Alaska	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Thatcher's Island, Mass.	.....	.....	30.21	767.3	23	— 5.0	60	NW	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Toledo, Ohio	.....	.....	30.12	765.0	31	— 0.6	79	S	8	3.6	.....	5ck	Haz	NW	.....	0	0	Fair	
Tucson, Arizona	27.48	698.0	30.03	762.7	48	8.9	.....	SE	.....	.....	.....	.....	10n	.....	SE	0.02	0.5	Light rain	
Tybee Island, Ga.	.....	.....	30.07	763 8	44	6.7	75	N	20	8.9	.....	10k	0	W	.....	0	0	Cloudy	
Vicksburg, Miss.	.....	.....	30.24	768.1	43.5	6.4	84	Calm	0	0	.....	0	Sm'c	.....	N	0	0	Clear	
Virginia City, M. T.	24.03	610.4	29.51	749.5	24	— 4.4	94	W	2	0.9	.....	.....	10n	.....	W	0.01	0.3	Light snow	
Washington, D. C.	.....	.....	30.24	768.1	26	— 3.3	82	Calm	0	0	.....	0	Sm'c	.....	NE	0	0	Smoky	
Wilmington, N. C.	.....	.....	30.10	764.5	32	0.0	69	N	7	3.1	.....	1ck	0	W	.....	0	0	Clear	

UNITED STATES SERIES.—CONTINUED.

STATIONS.	BAROMETER. Corrected for instrum'tal error and temperature. Inches.	BAROMETER. Corrected for instrum'tal error and temperature. Millimeters.	BAROMETER. Reduced to sea-level. Inches.	BAROMETER. Reduced to sea-level. Millimeters.	TEMPERATURE OF THE AIR. Fahrenheit.	TEMPERATURE OF THE AIR. Centigrade.	RELATIVE HUMIDITY. Per cent.	WIND. Direction. From—	WIND. Velocity. Miles per hour.	WIND. Velocity. Meters per second.	WIND. Force. 0—10.	CLOUDS. Amount. Up'er 0—10.	CLOUDS. Amount. Low'r 0—10.	CLOUDS. Direction. Upper. From—	CLOUDS. Direction. Lower. From—	RAIN-FALL OR MELTED SNOW IN THE PAST 24 HOURS. Inches.	RAIN-FALL OR MELTED SNOW IN THE PAST 24 HOURS. Millimeters.	WEATHER.	OBSERVER.
Wood's Holl, Mass.	.....	.....	30.22	767.6	25	— 3.9	63	N	5	2.2	.....	0	0	.....	.....	0	0	Clear.	
Yankton, Dakota	28.52	724.4	29.83	757.7	34	1.1	69	W	4	1.8	.....	0	0	.....	.....	0	0	Clear.	
Yuma, Arizona	.....	.....	29.86	758.4	61	16.1	.....	SE	.....	.....	.....	.....	10s	.....	S	0	0	Cloudy	
SUB-SERIES.																			
Kingston, Jamaica, W. I.	.....	.....	30.18	766.6	77	25.0	74	N	6	2.7	.....	8c	8s	SE	.....	0	0	.....	James Gall.
Navassa, W. I.	.....	.....	.....	.....	77	25.0	.....	SE	.....	.....	1	.....	.....	.....	.....	0.09	2.3	.....	Dr. G. H. Davison.
Clifton, Ja., W. I.	27.16	689.8	29.98	761.5	61	16.1	88	.....	.....	.....	.....	.....	.....	.....	.....	0	0	.....	C. Partridge.
Paramaribo, D. Guiana, S.A	.....	.....	30.02	762.5	79	26.1	87	E	.....	.....	2	0	5k	.....	.....	0	0	Clear	C. J. Hering.
Batavia, Dutch Guiana, S.A.	30.03	762.8	.....	.....	78.8	26	.....	E	.....	.....	.....	.....	.....	.....	.....	0	0	Cloudy	Dr. H. Groot.
Medellin, Colombia, S. A.	25.19	639.8	.....	.....	66 0	18.9	80	Calm	.....	.....	0	2k	1ks	.....	.....	0	0	Fair	Thomas Herran.
York Factory, B. A.	.....	.....	29.96	761.0	2.0	—16.7	86	N	3	1.3	.....	.....	10s	.....	.....	0.02	0.5	Gloomy	J. Fortescue, W. Wood
Honolulu, Oahu, H. I.	.....	.....	30.11	764.8	71	21.7	95	NE	.....	.....	2	.....	.....	.....	.....	0.05	1.3	Squally	Daniel Smith.
Makawao, Maui, H. I.	.....	.....	29.97	761.2	58	14.4	73	Calm	.....	.....	0	0	Haze	.....	.....	0	0	.....	F. L. Clarke.

NOTE.—The originals give the amount of cloudiness by the scale 0 to 4, except York Factory, Makawao, Medellin and Paramaribo. The elevation of the barometer at Bismarck is 1,677 feet, or 511.1 meters; Cheyenne, 6,057.3 ft., or 1,846.2 m.; Clifton, about 2,892 ft., or 881.5 m.; Denver, 5,135 ft., or 1,565.2 m.; Dodge City, 2486ft., or 757.8 m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Florence, 1,550 (?) ft., or 472.5 (?) m.; Makawao, 2,206 ft., or 672.1 m.; Morgantown, 1,027.9 ft., or 313.3 m.; Medellin, 4,870 ft., or 1,486.2 m.; Mt. Washington, 6,285 ft., or 1,915.6 m.; North Platte, 2,846 ft., or 867.4 m.; Omaha, 1,054.6 ft., or 321.4 m.; Pike's Peak, 14,150.7 ft., or 4,313.1 m.; Salt Lake City, 4,362.2 ft., or 1,329.6 m.; Santa Fé, 6,862.2 (?) ft., or 2,091.6 (?) m.; Tucson, 2,545 (?) ft., or 775.7 (?) m.; Virginia City, 5,480 (?) ft., or 1,670.3 (?) m.; Yankton, 1,278 ft., or 389.5 m. The following constants are added in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Denver, 5.22 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fé, 6.54 in.; Tucson, 2.59 in.; Virginia City, 5.48 in. The elevation of Batavia is about 6 feet; the barometric readings need the addition of 0.2 mm. or 0.01 in. for reduction to sea-level.

UNITED STATES NAVAL SERIES.

By authority of the **SECRETARY OF THE NAVY.**

Furnished by the coöperation of the Navy Department, through Commodore Daniel Ammen, U. S. N., Chief of Bureau of Navigation.

STATIONS AND VESSELS.	True course toward—	Hourly rate in knots.	*Barometer as reported.		Temperature of the Air.		Relative Humidity.	Wind.			Clouds.				Rain-fall or melted snow in the past 24 hours.		State of Ocean.	Direction of swell from—	Weather.	OBSERVER.
								Direction.	Velocity		Amount.		Direction.							
										Force.	Up'er	Low'r	Up'er	Low'r						
			Inches.	Millimeters.	Fahrenheit.	Centigrade.	Per cent.	From—	Miles per hour.	Meters per second.	0—10.	0—10.	From—	From—	Inches.	Millimeters.				
Naval Academy, Annapolis, Md.			29.85	758.2	27	— 2.8		NE			1		1		SE	0	0			Clear.	
Naval Hospital, Annapolis, Md.			30.24	768.1	25	— 3.9	100	N			1		0			0	0			Clear	
Navy Yard, Mare Island, Cal.			29.98	761.5	45	7.2	96	Calm			0		0			0	0			Clear.	
Navy Yard, Norfolk, Va.			30.28†	769.1†	36	2.2	90	NNE			4		5c8							‡D. clouds.	
Navy Yard, Pensacola, Fla.			30.15	765.8	49	9.4	89	NW			2		3			0	0			‡D. clouds.	
Navy Yard, Portsmouth, N.H.			30.12	765.0	13	—10.6		NW			2				S					Clear.	
¶ Canonicus, New Orleans, La.			30.11	764.8	49	9.4	85	NW			2		1		E					Clear.	
Colorado, New York, N. Y.			30.24	768.1	29	— 1.7		NNW			2		0			0	0			Hazy.	
Essex, N. 29°, 38′, W. 80°, 09′.			29.99	761.7	66	18.9		WNW			3		1					Moderate.	N	‡D. clouds.	
Hartford, Norfolk Va.			30.36	771.1	41	5.0		NE			2		8			0	0			Pleasant.	
Lackawanna, Mare Island, Cal.			30.15	765.8	51	10.6	86	Calm			0							Smooth		Wet.	
Marion, N. 32°, 38′, E. 34°, 37′.			30.10	764.5	60	15.6	94	SW			2		7		NW			Chop'd	SW	‡D. clouds.	
Michigan, Erie, Pa.			30.10	764.5	22	— 5.6	86	SW			1		2		SW					Partly cl'dy.	
Monongahela, Baltimore, Md.			30.16	766.1	23	0.6		ENE			1		0							Foggy	
New Hampshire, Port Royal, S. C.			30.26	768.6	40	4.4		NNE			4		6		S			Smooth		‡D. clouds.	
Omaha, Panama.			30.04	763.0	75	23.9	93	NW			1		1			0	0	Smooth		Pleasant.	
Ossipee, New Orleans, La.			30.18	766.6	55	12.8		NNW			2		0							Hazy.	
Pensacola, Panama.			30.02	762.5	78	25.6	86	NNW			2		1								
Plymouth, off Point a la Hache, La.			30.16	766.1	51	10.6	72	N			3		0							Pleasant.	
¶ Rio Bravo, Matamoras, Mex.			30.12	765.0	53	11.7	93	NE			1		9		SW					‡D. clouds.	
Santee, Annapolis, Md.			29.78	756.4	31	— 0.6		NE			1		1		SE					Clear.	
St. Louis, League Island, Pa.			30.10	764.5	29	— 1.7		NE			2		1		NE	0	0			Fair	
Vandalia, Constantinople, Turkey.			29.94	760.5	52	11.1	86	WSW			4		9		ESE					‡D. clouds.	
Wabash, Boston, Mass.			30.24	768.1	22	— 5.6		W			1		0							Hazy.	
Wyoming, Washington, D.C.			30.25†	768.3	25	— 3.9		Calm			0									Blue sky.	

* It is not known that the barometer is corrected for temperature, instrumental error or elevations. † Aneroid Barometer. ‡ Detached clouds. ¶ Barometer corrected for instrumental error and reduced to sea-level.

UNITED STATES MARINE SERIES

REPORTED TO THE OFFICE OF THE CHIEF SIGNAL OFFICER OF THE ARMY.

NAMES OF VESSELS.	TRUE COURSE TOWARD—	HOURLY RATE IN KNOTS.	BAROMETER REDUCED TO SEA-LEVEL.		TEMPERATURE OF THE AIR.		RELATIVE HUMIDITY.	WIND.				CLOUDS.				STATE OF OCEAN.	DIRECTION OF SWELL FROM—	WEATHER.	OBSERVER.
								Direction.	Velocity.		Force.	Amount.		Direction.					
												Up'er	Low'r	Upper.	Lower.				
			Inches.	Millimeters.	Fahrenheit.	Centigrade.	Per cent.	From—	Miles per hour.	Meters per second.	0—10.	0—10.	0—10.	From—	From—				
PACIFIC MAIL S. S. CO. MARINE SERIES. Furnished by the coöperation of ————, President; Williams, Blanchard & Co., Agents.																			
S. S. City of Peking																			Lt. Z. L. Tanner, U.S.N
OCCIDENTAL AND ORIENTAL S. S. CO. MARINE SERIES. Furnished by the coöperation of George H. Bradbury, President; T. H. Goodman, Agent.																			
S. S. Belgic																			Capt. John Metcalf.
S. S. Gaelic																			Capt. W. H. Kidley.
S. S. Oceanic																			Capt. H. Parsell.
NORTH GERMAN LLOYD OF BREMEN MARINE SERIES. Furnished by the coöperation of A. Schumacher & Co., Agents.																			
S. S. Baltimore																			Capt. H. Andressen.
S. S. Berlin																			Capt. C. Pohle.
S. S. Braunschweig																			Capt. K. Undütsch.
S. S. Nürnberg N. 37°, 20′, W. 70°, 16′	E ¾ N		30.04	763.0	52.2	11.2		NNE			5–6		..k		NNE	Swell.	E	Cloudy	Capt. A. Jaeger.
S. S. Ohio																			Capt. G. Meyer.
MARINE SERIES. (Miscellaneous.) Furnished by the coöperation of Captain James Jorgensen.																			
Schooner Addie Fuller, at Brunswick, Ga.			29.97	761.2	51	10.6	79	NE	12	5.4			108		NW			Threatening	Capt. James Jorgensen

NOTE.—The schooner Addie Fuller gives the amount of cloudiness by the scale 0 to 4.

COLLATED AT THE OFFICE OF THE CHIEF SIGNAL OFFICER OF THE ARMY, WASHINGTON, D. C.

The records which appear in this Bulletin are copied from the regular exchanges of this office, made in each instance in compliance with an especial reques and are published for the uses of the coöperating observers. The barometric readings in the first two columns are reduced to freezing and their respective standards; those in the second two also to mean sea-level. The "weather" is generally published as given.

When the distinction between the upper and lower strata of clouds is not reported, the *kinds* or *types*, viz: cirrus, cumulus, stratus, nimbus, scud, fracto, pallio, haze, fog and smoke, as indicated, respectively, by the letters c, k, s, n, d, f, p, hz., fg, and sm'e, are generally published with the amount in the lower-cloud column. The distinction between the upper and lower strata is carefully made in the United States Series and a portion of the Canadian Series, and the types are indicated by the above letters or their combinations in the proper column.

Albert J. Myer

Brig. Gen. (Bvt. Assg^{d}.) Chief Signal Officer, U. S. A.

BULLETIN

OF

INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON FEBRUARY 11, 1877.

7:35 A. M. WASHINGTON mean time.

6:7 A. M. MEXICO mean time.
7:7 A. M. SAN JOSE mean time.
0:6 P. M. LISBON mean time.
0:28 P. M. MADRID mean time.
0:43 P. M. GREENWICH mean time.
0:53 P. M. PARIS mean time.
1:1 P. M. BRUSSELS mean time.
1:4 P. M. UTRECHT mean time.
1:13 P. M. BERNE mean time.

10:2 P. M. TOKEI mean time.

1:26 P. M. CHRISTIANIA mean time.
1:33 P. M. COPENHAGEN mean time.
1:33 P. M. ROME mean time.
1:37 P. M. BERLIN mean time.
1:49 P. M. VIENNA mean time.
1:55 P. M. STOCKHOLM mean time.
2:18 P. M. ATHENS mean time.
2:39 P. M. CONSTANTINOPLE mean time.
2:44 P. M. ST. PETERSBURG mean time.

ALGERIAN SERIES.

Furnished by the coöperation of General d'Eudeville, Commandant Supérieur du Génie in Algeria.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Nemours	.....	.....	30.40	772.2	68.2	20.1	.....	SSE	.....	.....	2	.....	2	.....	.....	0	0	Clear	Michel.
Algiers	.....	.....	30.36	771.1	60.4	15.8	.....	WNW	.....	.....	1	.....	8	.....	.....	0	0	Cloudy	Biscarrat.
La Calle	.....	.....	30.29	769.3	57.2	14.0	.....	NW	.....	.....	3	.....	4	.....	.....	0.039	1 0	Fair	Fleury.
Tunis	.....	.....	30.27	768.8	61.0	16.1	.....	NW	.....	.....	3	.....	6	.....	.....	0	0	Fair	Jacques.
Sfax	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Saida	.....	.....	30.33	770.3	59.4	15.2	.....	NW	.....	.....	1	.....	1	.....	.....	0	0	Clear	Millot.
Tebessa	.....	.....	30.28	769.0	41.0	5.0	.....	N	.....	.....	2	.....	6	.....	.....	0	0	Fair	Bourgeois.
Geriville	.....	.....	30.28	769.2	43.5	6.4	.....	N	.....	.....	3	.....	1	.....	.....	0	0	Clear	Lemaillot.
Laghouat	.....	.....	30.32	770.0	59.2	15.1	.....	W	.....	.....	1	.....	0	.....	.....	0	0	Clear	Guyot.
Biskra	.....	.....	30.31	769.9	66.2	19.0	.....	NE	.....	.....	3	.....	4	.....	.....	0	0	Fair	Kuntz.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—In the originals the distinction between the amount of upper and lower clouds is apparently not made. The weather is published as given. The rain-fall is measured at 7 a. m., local time.

AUSTRIAN SERIES.

Furnished by the cooperation of Professor Dr. Julius Hann, Director of the Imperial and Royal Central Meteorological Institute at Vienna.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Agram	.....	.....	30.00	761.9	50.0	10.0	62	NE	.....	.....	2	.....	7	.....	.....	0	0	.....	Prof. Ivan Stozir.
Cracow, I. R. Observatory	.....	.....	29.58	751.3	34.5	1.4	93	W	.....	.....	2	.....	7	.....	.....	0.220	5.6	.....	Dr. Wierzbiski.
Eperies	.....	.....	29.90	759.4	35.4	1.9	85	NW	.....	.....	5	.....	6	.....	SE	0.089	2.25	Foggy	Julius Mikolik.
Gratz	.....	.....	30.04	762.9	39.6	4.2	84	SW	.....	.....	2	.....	10	.....	.....	0	0	.....	Andreas Rospini.
Hermannstadt	28.74	730.1	30.04	762.9	39.6	4.2	84	SW	.....	.....	2	.....	8	.....	.....	0.118	3.00	.....	Prof. Reissenberger
Kremsmünster	28.43	722.2	29.90	759.5	36.0	2.2	64	N	.....	.....	3	.....	8	.....	.....	0.157	4.0	.....	Prof. C. Wagner.
Lemberg	28.58	726.0	29.95	760.6	45.3	7.4	80	W	.....	.....	5	.....	10	.....	.....	0	0	.....	Dr. T. Stanecki.
Nyiregyhaza	.....	.....	29.80	756.9	31.6	— 0.2	96	NW	.....	.....	2	.....	10	.....	.....	.....	.....	.....	Habzsuda Daniel.
Pola	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0	0	.....	I.R.Hydrographic Office.
Szegedin	.....	.....	30.06	763.4	53.1	11.7	72	WSW	.....	.....	1	.....	10cs	.....	.....	0.041	1.05	.....	Karl Stancel.
Trieste	.....	.....	29.99	761.8	40.3	4.6	74	W	.....	.....	2	.....	10	.....	.....	0	0	Covered	Prof. V. Farolfi.
Vienna	.....	.....	30.08	764.0	49.3	9.6	91	Calm	.....	.....	0	.....	10	.....	.....	0.654	16.6	Rain & snow	I. R. Central Met. Obs'y.
.....	.....	.....	30.00	762.1	36.1	2.3	91	SW	.....	.....	1	.....	10	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
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.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NO. ...—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 7 p. m., local time. The elevation of Gratz is 343.5 meters, or 1,126.9 feet; Hermannstadt, 407.8 meters, or 1,337.9 feet; Kremsmünster, 383.6 meters, or 1,258.5 feet.

BELGIAN SERIES.

Furnished by the cooperation of J. C. Houzeau, Director of the Royal Observatory at Brussels.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Arlon	.....	.....	30.01	762.2	43.2	6.2	93	WSW	.....	.....	6	.....	10	.....	.....	0.110	2.8	.....	Royal Observatory.
Brussels	.....	.....	29.84	758.0	47.3	8.5	95	SW	.....	.....	3	.....	10n	.....	WSW	0.108	2.70	Light rain	
Furnes	.....	.....	29.83	757.7	52.5	11.4	85	WSW	.....	.....	6	.....	4	.....	.....	0.047	1.2	.....	
Maeseyck	.....	.....	29.83	757.7	46.8	8.2	93	SW	.....	.....	8	.....	10	.....	.....	0.087	2.2	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

NOTE.—In the originals, the weather is occasionally given in general notes.

BRITISH SERIES.

Furnished by the coöperation of Robert H. Scott, Esq., Director of the Meteorological Office, London, Alexander Buchan, Secretary of the Scottish Meteorological Society, Edinburgh, and the respective Observers.

STATIONS.	Barometer. Corrected for instrumental error and temperature. Inches.	Barometer. Corrected for instrumental error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Aberdeen			29.48	748.8	35.6	2.0		NNW	16	7.2			10			0.525	13.34	Raining	William Boswell.
Ardrossan																			William McNeil.
Armagh, Observatory			29.79	756.7	50.7	10.4		WSW	22	9.8									S. Call, for Dr. Robinson.
Bidston (Liverpool Obs.)			29.74	755.4	49.0	9.4		WSW	47	21.0			10					Overcast	John Hartnup.
Birr Castle, (Parsonstown)			29.91	759.7	51.0	10.6		W			1		7					*D. clouds	J. Dreyer.
Bradford																0.11	2.8		J. McLandsborough.
Bridgetown, (Barbados)			30.05	763.3	79.2	26.2		NE			2		6					*D. clouds	Sergt. J. F. Halanen, A.
Cambridge, Observatory			29.79	756.7	53.0	11.7		WSW			3		7			Blank	Blank	*D. clouds	H. Todd. [H.C.
Cardington			29.82	757.4	52.4	11.3		W			5		1					Blue sky	John McLaren.
Carlisle																			T. Bell, for J. Cartmell.
Chatham, School M. E.			29.91	759.7	54.2	12.3		NW			4		6					Blue sky	Capt. Fellows, R. E.
Dartmoor	28.55	725.2	30.04	763.0	46.5	8.1		NW			6		5					*D. clouds	R. E. Power.
Davos Platz, (Switzerland)	24.89	632.2			38.0	3.3	84	Calm			0		6			0	0	Hazy	Francis Redford, M. A.
Donaghadee			29.71	754.6	49	9.4		WNW			4		2					Blue sky	J. Mac Gowan.
Dover			29.84	757.9	52	11.1		WSW			5		7					¾ clouded	J. Costello.
Eccles, (near Manchester)			29.73	755.1	49.4	9.7		W	16.8	7.5			10					Showery	Thomas Mackereth.
Falmouth, Observatory			30.06	763.5	52.3	11.3		W			4		3					*D. clouds	The Staff.
Fort Napier, (Natal)	27.57	700.3	29.80	756.9	73.1	22.8		E			1		10					Overcast	P'vt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.94	760.5	87	30.6		Calm			0		3					*D. clouds	
Galway, Queen's College			29.89	759.2	47	8.3		W			6		7					Raining	Prof. A. H. Curtis.
Gibraltar, (Mediterranean)			30.34	770.6	62.7	17.1		NW			4		1					*D. clouds	Corpl. C. Aitken, A.H.C.
Glasgow, Observatory			29.54	750.3	48.0	8.9		W			4		10					Raining	Lewis Stuart.
Great Yarmouth			29.69	754.1	50	10.0		WNW			6		3					Squally	G. T. Watson.
Greenwich, Royal Obs'y			29.85	758.2	52.8	11.6		W			5		4			Blank	Blank	*D. clouds	The Staff, for G. B. Airy.
Guernsey			30.05	763.3	52.5	11.4		WNW			5		3			Blank	Blank	*D. clouds	Dr. S. E. Hoskins.
Helston			30.08	764.0	55	12.8		W			4		2c			0.13	3.3	Fine	M. P. Moyle.
Holyhead			29.84	757.9	50	10.0		WSW			4		3					*D. clouds	John Tilston.
Kew, Observatory			29.86	758.4	53.1	11.7		W	24	10.7			5					Hazy	The Staff.
Kingstown			29.82	757.4	51	10.6		WNW			6		4					*D. clouds	George Mitchell.
Leicester Museum			29.78	756.4	52.2	11.2		W			5		8					*D. clouds	Wm. J. Harrison, F.G.S.
Malta, (Mediterranean)			30.16	766.1	60.8	16.0		NW			2		8					Overcast	Corp'l. P. Bravis, A.H.C.
Nairn			29.55	750.6	36	2.2		ESE			1		10					Raining	W. D. Penny.
Nassau, (Bahamas)			30.00	762.0	61.5	16.4		NW			7		8					Squally	Surg. Maj. Henry.
Nottingham, Observatory			29.76	755.9	53.3	11.8		WNW			6		8k,d		WNW	0.06	1.6?	Overcast	F. J. Lowe, F. R. S.
Oscott, St. Mary's College			29.81	757.2	49.0	9.4		W			5		10					Threatening	Rev. Stephen Whitty.
Oxford, Radcliffe Obs'y			29.87	758.7	52	11.1		W			4		9					Overcast	J. Lucas.
Plymouth			30.02	762.5	55.5	13.1		W			3		2					*D. clouds	John Merrifield.
Roche's Point			29.98	761.5	51	10.6		WNW			4		5					Cloudy	W. Kennedy.
Saint Ann's Head																			John C. Walker.
Saint Helier, (Jersey)			30.06	763.5	53.6	11.7		WSW			3		8					¾ clouded	A. P. Amy.
Sandwick Manse, (Orkneys)			29.62	752.3	34.1	1.2		NE	20	8.9			8					Snowing	Rev. C. Clouston, LL. D.
Scarborough																			F. Shaw.
Scutari Cemetery, (Turkey)			29.87	758.7	53.0	11.7		SW			2		5					*D. clouds	Sergt. W. H. Lyne.
Sheffield			29.70	754.4	50.7	10.4		NW			7		7			0.139	3.52	Squally	W. F. Cooper.
Silloth Rectory			29.67	753.6	48.4	9.1	80	W			6		4			0.329	8.12	*D. clouds	Rev. Francis Redford
Stonyhurst, Observatory			29.71	754.6	47.6	8.2		W			6		8					Misty	Rev. S. J. Perry.
Stornoway, Lewis C., (Hebr.)			29.64	752.8	36	2.2		NE			4		10					Overcast	John Smith.
Stratfield Turgiss			29.90	759.4	54.4	12.4		W			3		3					Blue sky	Rev. Charles H. Griffith.
Thurso			29.58	751.3	36	2.2		ENE			4		8					Gloomy	John Trotter.
Truro, Royal Institution			30.04	763.0	56	13.3		W			6		5					*D. clouds	W. Newcombe.
Valencia, Observatory			29.96	761.0	52.3	11.3		W	22	9.8			10					*D. clouds	The Staff.
SUB-SERIES.																			
Calf of Man, (Isle of Man)																			Henry Mercer.
Cape Good Hope, Obs'y			30.04	763.0	80.5	26.9	55	WSW	7	3.1		10	2						The Staff, for E. J. Stone.
Hobart Town, (Tasmania)			29.71	754.6	80.0	26.7	84	NW			2		8kn			0	0	Cloudy	Francis Abbott, F.R.A.S.
Leith, Restalrig Park			29.54	750.3	49.8	9.9		W			5		7k			0.26	6.6	Cloudy	Andrew Gibb.
Mauritius, Observatory			29.54	750.3				SW	32.4	14.5						1.73	43.9		C. Meldrum.
Melbourne, Observatory			29.89	759.2	75.4	24.1	67	NNW	5	2.2			6			0.04	1.0	Very sultry	R. L. J. Ellery.
Monach L't-house, (Hebrides)																			J. Youngclause.
North Unst, (Shetland Is.)			29.57	751.1	33	0.6		N			4	0	4			Blank	Blank		Robert Burnet.

NOTE.—Generally, the originals do not give the relative humidity, rain-fall, or distinction between upper and lower clouds. The originals give the wind direction to 32 points and weather by the Beaufort notation. The originals give the barometer for Aberdeen, Cardington, Free town, Galway, Oxford, St. Helier, Sandwick, Scarborough, Stonyhurst, Leith, Monach and North Unst as read off and the amount of cloudiness for Stornoway by the scale 0 to 4. The wind-force is given by the scale 0 to 12 in the official series; 0 to 6 in the sub-series; except in lbs. per square foot for Greenwich and Hobart Town. The rain-fall is measured at Aberdeen at 10 a. m.; Bradford, 9 a. m.; Hobart Town, 7:30 a. m.; Nottingham, 6 p. m.; Mauritius, 9 a. m., local time. The elevation of Dartmoor is 1,400 feet, or 426.7 meters; Davos Platz, 5,167 feet, or 1,576.67 meters; Fort Napier, 2,200 feet, or 670.6 meters. *Detached clouds.

By authority of the MINISTER OF FOREIGN AFFAIRS.

COSTA RICA SERIES.

Furnished by the coöperation of Senor Federico Maison, Director of the Central Office of Statistics and Meteorology.

San José																			

DANISH SERIES.

Furnished by the coöperation of Captain N. Hoffmeyer, Director of the Royal Danish Meteorological Institute at Copenhagen.

Copenhagen			29.65	753.0	33.1	0.6	87	SE			2		10						
Fanöe			29.45	748.1	32.5	0.3	100	SSE			4		10					Snowing	
Godthaab, (Greenland)			29.66	753.4	14.5	— 9.7	81	NNE			4		2						
Stykkisholm, (Iceland)			29.85	758.2	19.9	— 6.7	95	E			0		0						
Thorshavn, (Faröe)			29.77	756.1	35.4	1.9	82	N			2		10					Snowing	
Vestervig			29.41	747.1	31.6	— 0.2	96	Calm			0		10					Snowing	

NOTE.—The originals give the wind-force by the scale 0 to 6; occasionally, weather by Vienna symbols; no distinction between the amount of upper and lower clouds.

FRENCH SERIES.

Furnished by the co operation of His Excellency, U. J. Le Verrier, Director of the Paris Observatory, and the respective Observers.

STATIONS.	Barometer, corrected for instrum'tal error and temperature. Inches.	Barometer, corrected for instrum'tal error and temperature. Millimeters.	Barometer, reduced to sea-level. Inches.	Barometer, reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10	Clouds. Amount. Up'er. 0—10.	Clouds. Amount. Low'r. 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Alençon	.....	.....	30.14	765 6	50.0	10	95	W	.....	.....	3	.....	10ns	.....	W	0	0	Covered	Normal School.
Amiens	.....	.....	29.91	759.8	51.1	10.6	84	NE	.....	.....	3	.....	5	.....	NE	0.126	3.2	Cloudy.....	Normal School.
Avignon	.....	.....	30.19	766.7	59.5	15.3	50	N	.....	.....	3	.....	0	.....	.....	0	0	Very clear...	Normal School.
Bar-sur-Seine	.....	.....	30.13	765.4	49.8	9.9	71	WSW	.....	.....	2	.....	10	.....	SW	0.098	2.5	Covered	C. Saillard.
Beaumette, (near Angers)	.....	.....	30.15	765.7	51.1	10.6	93	SW	21.7	9.7	.....	.....	.....	.....	SW	0.047	1.2	.....	Beaumette Observ'tory.
Beauvais	.....	.....	30.03	762.8	49.8	9.9	84	W	.....	.....	3	.....	10	.....	WNW	0.033	0.85	Covered	Normal School.
Besançon	.....	.....	30.22	767.6	49.8	9.9	83	S	.....	.....	4	.....	8	.....	W	0.31	8.	Very cloudy	Normal School.
Bourg en Bresse	.....	.....	30.39	772.0	49.1	9.5	84	W	.....	.....	2	.....	10kn	.....	.....	0.126	3.2	Covered	Normal School.
Bourges	.....	.....	30.20	767.0	50.0	10	84	SSW	.....	.....	6	.....	5	.....	SW	0.031	0.8	Cloudy.....	Normal School.
Brest	.....	.....	30.07	763.8	54.9	12.7	86	W	.....	.....	3	.....	9	.....	W	0.128	3.25	Misty.....	Naval Observatory.
Carcassonne	.....	.....	30.30	769.6	51.8	11	59	W	.....	.....	3	.....	2	.....	E	0	0	Slightly cl'dy	Normal School.
Caen	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Chartres	.....	.....	29.99	761.6	48.9	9.4	66	W	.....	.....	6	.....	10	.....	E	0	0	Covered	Normal School.
Châlons-sur-Marne	.....	.....	30.11	764.7	48.0	8.9	80	SW	.....	.....	6	.....	10n	.....	NE	0.010	0.4	Covered	Normal School.
Clermont	.....	.....	30.26	768.7	52.2	11.2	61	W	.....	.....	1	.....	0	.....	.....	0	0	.....	Puy de Dome Obs'y.
Commercy	.....	.....	30.17	766.2	48.0	8.9	76	W	.....	.....	8	.....	8kn	.....	SW	0.16	4.	Very cloudy	Normal School.
Commune de Gréasque*	.....	.....	30.17	766.3	55.2	12.9	48	NW	.....	.....	2	.....	2	.....	NW	0	0	.....	M. Kina.
Grenoble	.....	.....	30.24	768.1	48.0	8.9	67	NE	.....	.....	2	2c	.....	N	.....	0	0	Slightly cl'dy	Normal School.
La Roche-sur-Yon	.....	.....	30.24	768.0	51.4	10.8	85	SW	.....	.....	2	.....	10	.....	.....	0.016	0.40	Covered	Normal School.
Le Mans	.....	.....	30.19	766.9	49.1	9.5	89	WSW	.....	.....	4	.....	10	.....	.....	0	0	Covered	Normal School.
Lons-Le-Saulnier	.....	.....	30.24	768.2	49.1	9.5	92	S	.....	.....	2	.....	5	.....	.....	0	0	Cloudy.....	Normal School.
Lorient	.....	.....	30.10	766.0	56.5	13.6	82	SW	.....	.....	6	.....	10	.....	.....	0.165	4.2	Covered	Naval Observatory.
Mâcon	.....	.....	30.48	774.1	47.7	8.7	70	Calm	.....	.....	0	.....	10	.....	.....	0.094	2.4	Covered	Normal School.
Metz	.....	.....	30.10	764.5	45.7	7.6	91	SW	.....	.....	2	.....	10	.....	.....	0.110	2.8	Covered	M. Schuster.
Mirecourt	.....	.....	30.10	764.6	48.0	8.9	89	SW	.....	.....	4	.....	10	.....	NE	0	0	Covered	Normal School.
Nismes	.....	.....	30.17	766.2	60.4	15.8	41	NE	.....	.....	6	2c	.....	E	.....	0	0	Slightly cl'dy	Normal School.
Orleans	.....	.....	30.15	765.8	50.4	10.2	80	W	.....	.....	6	.....	10	.....	W	0	0	Covered	Normal School.
Paris, Observatory	.....	.....	30.07	763.7	48.6	9.2	93	SW	.....	.....	4	.....	10n	.....	W	.....	.....	Light rain...	National Observatory.
Parthenay	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Privas	.....	.....	30.22	767.6	53.8	12.1	68	NW	.....	.....	2	.....	2	.....	NW	0	0	Slightly cl'dy	Normal School.
Rochefort, Observatory	.....	.....	30.29	769.3	54.0	12.2	74	SW	.....	.....	4	.....	10	.....	NE	0.138	3.5	Covered	Naval Observatory.
Rouen	.....	.....	30.02	762.4	51.4	10.8	85	W	.....	.....	2	.....	10	.....	SW	0	0	Covered	Normal School.
Saint Lo	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Tarbes	29.22	742.2	30.32	770.0	54.5	12.5	83	W	.....	.....	1	.....	0	.....	.....	0	0	Clear.....	Normal School.
Villefranche	.....	.....	30.31	769.9	50.9	10.5	80	W	.....	.....	3	.....	8	.....	W	0.055	1.4	Very cloudy	Normal School.
Sub-Series.																			
Fort de France, Martinique	.....	.....	29.87	758.7	75.2	24	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	L'Abbé Marchési.
Marseilles	.....	.....	30.11	764.9	59.5	15.8	45	WNW	.....	.....	1	.....	.....	.....	.....	0	0	Clear.....	Marseilles Observatory.
Mont-Louis	25.01	635.3	30.33	770.3	50.7	10.4	14	NW	7.4	3.33	.....	.....	0	.....	.....	0	0	.....	—. Falguère.
Montsouris, Paris	.....	.....	30.06	763.4	48.2	9.0	91	WSW	.....	.....	4	.....	10	.....	WSW	Inap.	Inap.	Light rain....	Montsouris Observatory
Perpignan	.....	.....	30.24	768.1	58.1	14.5	47	NW	16.8	7.50	.....	.....	1	.....	NW	0	0	.....	Dr. Fines.
Pic du Midi, (Summit,) H. P.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. Baylac.
Pic du Midi, (Plantade,) H. P.	22.67	575.7	.....	.....	37.4	3.0	.....	W	.....	.....	3	.....	0	.....	.....	0	0	Clear.....	General de Nansouty.
Saint Maur, (near Paris)	.....	.....	30.07	763.7	48.4	9.1	96	WSW	.....	.....	3	.....	10	.....	.....	0	0	Very cloudy	E. Renou.
Toulouse	.....	.....	30.38	771.7	50.9	10.5	59	NW	.....	.....	3	.....	10	.....	.....	0	0	.....	Toulouse Observatory.
Tours	.....	.....	30.18	766.6	50.7	10.4	86	WSW	.....	.....	2	.....	10	.....	W	0	0	.....	C. Marquet.
Versailles, (near Paris)	.....	.....	30.07	763.7	48.9	9.4	95	W	.....	.....	3	.....	10	.....	.....	0.007	0.18	Covered	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai)	.....	.....	30.39	771.8	30.6	— 0.8	77	NW	14.5	6.50	.....	.....	0	.....	.....	0	0	.....	Marc Dechevrens, S. J.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—Generally, the originals give the wind-force by the scale 0 to 7; no distinction between upper and lower clouds, and, in the Algiers series, the amount by the scale 0 to 4 the rain-fall as measured at 7, 8 or 9 a. m., local time; at Clermont, 9 a. m. of the following day; the weather in general terms as published. The elevation of Clermont is 388 meters, or 1,272.9 feet; Commune de Gréasque, 322 meters, or 1,056.4 feet; Tarbes, 308 meters, or 1,010 feet; Mont-Louis, 1,586.40 meters, or 5,204.8 feet; Pic du Midi, (Summit,) 2,877 meters, or 9,439.1 feet; Pic du Midi, (Plantade,) 2,366 meters, or 7,762.6 feet. In correcting the Mont-Louis barometric observations for altitude, the constant 135. millimeters has been added. *Bouches-du-Rhône

GERMAN SERIES.

Furnished by the coöperation of Professor Dr. G. Neumayer, Director of the German Naval Observatory, Hamburg.

STATIONS.	Barometer, corrected for instrum'tal error and temperature. Inches.	Barometer, corrected for instrum'tal error and temperature. Millimeters.	Barometer, reduced to sea-level. Inches.	Barometer, reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10	Clouds. Amount. Up'er. 0—10.	Clouds. Amount. Low'r. 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Bamberg	.....	.....	29.86	758.5	46.4	8.0	77	W	.....	.....	7	.....	10	W	.....	0.276	7.0	Raining.....	Prof. T. Hoh.
Berlin	.....	.....	29.87	758.8	36.5	2.5	85	S	.....	.....	2	.....	10	.....	.....	0.240	6.1	Raining.....	Prof. Arndt.
Breslau	.....	.....	29.90	759.4	36.7	2.6	66	WSW	.....	.....	2	.....	10	.....	.....	0.327	8.3	.....	Royal University Obs'y.
Carlsruhe	.....	.....	29.97	761.3	50.0	10.0	74	SW	.....	.....	5	.....	10	.....	.....	0.315	8.0	.....	A. Senz.
Cassel	.....	.....	29.76	755.8	46.2	7.9	80	WSW	.....	.....	7	.....	10	WSW	.....	0.075	1.9	.....	Dr. H. Möhl.
Crefeld	.....	.....	29.76	756.0	47.1	8.4	91	SW	.....	.....	6	.....	10	.....	.....	0.20	5.	Raining.....	Director Lose.
Emden	.....	.....	29.58	751.4	45.7	7.6	96	SW	.....	.....	7	.....	10	.....	.....	0.374	9.5	.....	Prof. Prestel.
Frankfort on the Main	.....	.....	29.93	760.3	47.3	8.5	82	SW	.....	.....	3	.....	10	.....	.....	0.555	14.1	Raining.....	Physical Society.
Friedrichshafen	28.69	728.7	30.15	765.8	47.1	8.4	79	SSW	.....	.....	8	.....	10	.....	.....	.....	.....	Light rain....	M. Wilhelm.
Hamburg	.....	.....	29.62	752.3	33.4	0.8	98	SSE	.....	.....	3	.....	10	.....	.....	0.169	4.3	Covered	Captain F. Hegemann.
Kiel	.....	.....	29.55	750.6	34.2	1.2	93	SE	.....	.....	3	.....	10	.....	.....	0.130	3.3	.....	Prof. G. Karsten.
Königsberg, (Prussia)	.....	.....	29.77	756.1	31.1	— 0.5	77	NW	.....	.....	5	.....	5	.....	.....	0.004	0.1	Snowing.....	Prof. E. Luther.
Köslin	.....	.....	29.81	757.2	29.7	— 1.3	.....	.....	.....	.....	.....	.....	10	.....	.....	0	0	.....	H. Müller.
Leipsic	.....	.....	29.81	757.1	36.9	2.7	100	S	.....	.....	2	.....	10	SSW	.....	0.083	2.1	.....	Prof. Bruhns.
Memel	.....	.....	29.73	755.2	30.0	— 0.6	70	NW	.....	.....	5	.....	7ck	.....	.....	0	0	.....	Reinbrecht & Skalweit.
Münster	.....	.....	29.73	755.1	46.4	8.0	97	SW	.....	.....	4	.....	10	.....	.....	0.091	2.3	.....	Prof. E. Heis.
Neufahrwasser	.....	.....	29.81	757.1	33.6	0.9	68	WNW	.....	.....	1	.....	0	.....	.....	0	0	.....	A Lothe.
Posen	.....	.....	29.86	758.5	34.7	1.5	77	SW	.....	.....	3	.....	10	.....	.....	0.167	4.0	.....	Dr. Magener.
Strassburg, (in Alsace)	.....	.....	30.08	763.9	50.9	10.5	70	W	.....	.....	3	.....	10	W	.....	0.055	1.4	.....	Dr. Schur.
Stuttgart	.....	.....	30.03	762.7	50.4	10.2	65	W	.....	.....	2	.....	10	.....	.....	0.016	0.4	Light rain...	Prof. Schoder.
Thorn	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Dr. Hasenbalg.
Treves, (Trier)	.....	.....	29.89	759.3	47.5	8.6	80	SW	.....	.....	8	.....	10	.....	.....	0.075	1.9	Foggy	Prof. Flesch.
Weissenburg, (Bavaria)	28.45	722.7	29.98	761.6	45.3	7.4	78	W	.....	.....	7	.....	10	WNW	.....	0.283	7.2	.....	Dr. von Bebber.
Wustrow, Naval School	.....	.....	29.77	756.2	32.0	0.0	97	SSE	.....	.....	4	.....	5	.....	.....	0	0	.....	E. F. Schütz.
German Naval Series.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—The elevation of Friedrichshafen is 413.4 meters, or 1,356.3 feet; Weissenburg, 431 meters, or 1,414.0 ft. In the originals the distinction between the amount of upper and lower clouds is not made. It is not always certain that the remarks in the weather column refer to the moment of observation.

GREEK SERIES.

Furnished by the coöperation of Professor Dr. J. F. Julius Schmidt, Director of the Royal Observatory at Athens.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Athens			30.04	762.9	61.3	16.3		W										Very clear...	

Note.—The originals give the barometer corrected, but not reduced to sea-level; occasionally the kind of clouds; the weather as published. They omit the humidity, wind-force, amount of cloudiness and rain-fall.

ITALIAN SERIES.

Furnished by the cooperation of His Excellency the Minister of Agriculture, Industry and Commerce, and the respective Observers.

Udine			30.04	763.0	47.8	8.8	63	Calm	0	0			10			0	0		Prof. Giovanni Clodig
Stelvio	22.13	562.0			32.0	0.0		W			2		6	SE		0	0		Signora Ernesta Manfredi.
Valdobbia	22.17	563.2			30.6	— 0.8	73	W			4		8	NW		0	0		Ab. Dom. Mongini.
Padua			30.04	763.0	46.6	8.1	70	NNE	2.5	1.1			10			0	0		Prof. Dott. Lorenzoni.
Vicenza			30.05	763.2	46.2	7.9	69	E	0	0			10			0	0		Conte Alm. Da Schio.
Verona			30.00	762.0	48.9	9.4	69	E			1		0			0	0		Dott. B. Bertoncelli.
Bergamo	28.62	726.9	29.97	761.1	50.0	10.0	57	SW			1		7			0	0		Prof Trionfini Carlo.
Domodossola			30.00	761.9	51.4	10.8	55	S			2		6			0	0		Prof. Giuseppe Colza.
Milan			30.03	762.8	55.8	13.2	72	E			2		2	NW		0	0		Ab. Gio. Capelli
Pavia			30.03	762.8	50.7	10.4	75	E			4		5	NW		0	0		Prof. Gio. Cantoni.
Moncalieri			30.02	762.4	53.8	12.1	60	SSE	4.3	1.9			4	N		0	0		Prof. F. Denza.
Mondovi	28.08	713.3	30.03	762.7	58.3	14.6	40	NE			2		1	WNW		0	0		Prof. D. C. Bruno.
Porto Maurizio			30.14	765.6	57.2	14.0	61	SW			2		1			0	0		Prof. L. Vassallo.
Genoa			30.09	764.3	54.7	12.6	68	SE	6.9	3.1			10	S		0	0		Prof. G. M. Garibaldi.
Piacenza			30.05	763.2	47.7	8.7	76	E	4.5	1.9			5	NW		0	0		Dott. G. Manzi.
Parma			30.05	763.2	49.5	9.7	70	ENE			2		8			0	0		Prof. P. Pigorini.
Florence			30.11	764.9	58.1	14.5	72	W			2		10	WSW		0	0		Cav. F. Meucci.
Leghorn			30.11	764.7	56.7	13.7	70	S	0.7	0.3			4	NW		0	0		Prof. P. Monte.
Siena	28.87	733.2	30.09	764.3	56.1	13.4	58	SSW	0	0			7	SW		0	0		Prof. L. Toscani.
Urbino	28.50	723.9	30.09	764.3	51.3	10.7	60	SSW			2		3			0	0		Prof. P. Serpieri.
Pesaro			30.07	763.8	50.7	10.4	84	ENE	13.0	5.8			8	W		0	0		Prof. Luigi Guidi.
Ancona			30.07	763.7	55.4	13.0	55	SE			4		2			0	0		Prof. F. De— Bosis.
Grosseto			30.12	765.0	59.0	15.0	67	SSW			2		6			0	0		Avv. P. Ponticelli.
Rome			30.13	765.3	59.2	15.1	54	SSW	2.7	1.1			8	SSW		0	0		Prof's. P. Secchi & L. Respighi
Naples, O. U.			30.15	765.7	59.5	15.3	65	SW			1		9	NW		0	0		Prof. L. Palmieri.
Lecce			30.13	765.3	55.0	12.8	64	NNE	12.7	5.6			1			0	0		Prof. C. De—Giorgi.
Cosenza			30.14	765.6	52.9	15.5	54	NW	3.8	1.7			3	E		0	0		Prof. F. D. Conti.
Cagliari			30.13	765.2	57.9	14.4	52	NW			6		3	WNW		0	0		Prof. A. Pacinotti.
Ilposto, (Sicily)			30.08	764.0	59.4	15.2	56	SE			2		8	S		0	0		Prof. F. Caflero.
Palermo			30.08	764.1	57.4	14.1	62	WNW	1.8	0.8			10			0	0		Prof. G. Cacciatore.
Caltanissetta	28.16	715.2	30.14	765.6	50.2	10.1	62	W			2		10	S		0	0		Prof. A. Pagani.
Siracusa			30.16	766.1	58.8	14.9	55	E			0		7	SE		0	0		Prof. V. Giuliano.
Sub-Series.																			
Naples, S. R.			30.16	766.0	55.9	13.3	71	SW	1.3	0.6			9	W		0	0		Prof. F. Brioschi.

Note.—The originals give the wind-force by the scale 0 to 4, or the velocity in kilometers per hour; generally, no distinction between upper and lower clouds; occasionally the weather by the Vienna symbols. The elevation of Stelvio is 2,543.0 meters, or 8,342.9 feet; Valdobbia, 2,548.0 meters or 8,359.3 feet; Bergamo, 379.6 meters, or 1,245.3 feet; Mondovi, 556 meters, or 1,824.2 feet; Siena, 348.5 meters, or 1,143.3 feet; Urbino, 451 meters, or 1,479.7 feet; Caltanissetta, 570.3 meters, or 1,871.0 feet.

JAPANESE SERIES.

Furnished by the coöperation of the Imperial University of Tokei, Japan.

Tokei																			Prof. P. V. Veeder.

Note.—The originals give the amount of cloudiness by the scale 0 to 4 without distinguishing between upper and lower clouds. The rain-fall is measured at 7 a. m., local time.

MEXICAN SERIES.

By authority of the Secretary of Public Works.

Furnished by the coöperation of Senor Mariano Barcena, Director of the Central Meteorological Observatory in the City of Mexico.

Mexico																			Mariano Barcena. Vicente Reyes. Miguel Perez. (Engineers in charge.)

Note.—The elevation of Mexico is 2,290 meters, or 7,512.9 feet. The rain-fall is measured at 6 a. m., local time.

NETHERLANDS' SERIES.

Furnished by the coöperation of Professor Buys Ballot, Director of the Royal Meteorological Institute of the Netherlands at Utrecht.

Flushing			29.82	757.4	48.6	9.2		WSW			5					0.059	1.5		
Groningen			29.49	749.0	45.9	7.7										0.130	3.3		
Helder			29.57	751.1	46.4	8.0		SW			6					0.079	2.0		
Utrecht			29.65	753.2	48.6	9.2	95	WSW			6		8			0.138	3.5	Very cloudy	

Note.—The originals give the wind-pressure in kilograms per square meter; for Utrecht, they give the weather as published, from which the amount of cloudiness is taken by the scale 0 to 4, without distinguishing between upper and lower clouds. It is assumed that the barometer readings have been reduced to sea-level.

NORWEGIAN SERIES.

Furnished by the coöperation of Professor H. Mohn, Director of the Royal Norwegian Meteorological Institute at Christiania.

Bergen			29.56	750.7	33.4	0.8	82	NNW	3.1	1.4			6			0	0		
Brönö			29.52	749.7	29.8	— 1.2	76	SSE	8.9	4			10					Snowing	
Christiania			29.64	752.9	14.4	— 9.8	81	NW	0	0			8			0	0		
Tromsö			29.47	748.6	18.1	— 7.7	69	SW	20.1	9			10			0	0		

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols. The cloudiness and weather at Bergen refer to 2h., p. m., local time, instead of 1h., 4 min.

PORTUGUESE SERIES.

Furnished by the coöperation of J. C. de Brito Capello, Director of the Meteorological Observatory of the Infante Don Luiz at Lisbon.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Angra, (Azores)	.....	.....	30.27	768.9	61.7	16.5	92	SSW	16.1	7.2	.....	.....	8	.....	.....	0	0	.....	Dr. J. A. Sampaio.
Campo Major	.....	.....	30.41	772.4	43.2	6.2	97	Calm	0	0	.....	.....	10	.....	.....	0	0	Smoke-haze.	Dr. A. M. R. dos Santos.
Funchal, (Madeira)	.....	.....	30.42	772.7	64.4	18.0	59	ESE	9.8	4.4	.....	.....	1	.....	.....	0	0	.....	Capt. D. A. de Cunha.
Lisbon	.....	.....	30.43	773.0	55.4	13.0	66	NNW	17.4	7.8	.....	.....	8	.....	.....	0	0	.....	The Observatory.
Ponta Delgada, (Azores)	.....	.....	30.37	771.5	64.4	18.0	82	S	6.9	3.1	.....	.....	3	NE	.....	0	0	.....	

Note.—The originals give the wind-velocity in kilometers per hour; occasionally, the weather by the Vienna symbols; the amount of cloudiness without distinguishing between upper and lower clouds; the barometer corrected but not reduced to sea-level. The rain-fall at Lisbon is measured at noon, instead of 0 h. 6 m., p. m.

RUSSIAN SERIES.

Furnished by the coöperation of Professor H. Wild, Director of the Imperial Central Physical Observatory of Russia, at St. Petersburg.

Warsaw	.....	.....	29.85	758.2	28.8	— 1.8	90	WSW	16	7	.....	.....	6	.....	.....	.....	.....	Solar corona	Astronomical Obs.
Wilna	.....	.....	29.65	753 0	28.9	— 1.7	80	Calm	0	0	.....	.....	10	.....	.....	.....	.....	Snowing	Astronomical Obs.
Dorpat	.....	.....	29.66	753.4	18.3	— 7.6	93	ESE	9	4	.....	.....	10	.....	.....	.....	.....	.....	Physical Cabinet.
St. Petersburg	.....	.....	29.71	754.7	9.7	—12.4	84	SE	9	4	.....	.....	10	.....	.....	.....	.....	.....	Central Physical Obs.
Kuopio	.....	.....	29.71	754.6	5.7	—14.6	96	ESE	13	6	.....	.....	10	.....	.....	.....	.....	Snowing	Ch. Forsten.
Kieff	.....	.....	29.52	749.8	26.2	— 3.2	100	N	16	7	.....	.....	10	.....	.....	.....	.....	Snowing	Physical Cabinet.
Nikolaiev	.....	.....	29.34	745.3	36.1	2.3	77	W	18	8	.....	.....	10	.....	.....	.....	.....	.....	Kurdakof.
Kertch	.....	.....	29.49	749.1	41.9	5.5	90	SSW	16	7	.....	.....	10	.....	.....	.....	.....	.....	Lagorio.
Moscow	.....	.....	29.84	757.9	1.6	—16.9	80	SE	7	3	.....	.....	10	.....	.....	Blank	Blank	.....	Meteorological Obs.
Lugan	.....	.....	29.59	751.6	28.4	— 2.0	80	SSE	13	6	.....	.....	10	.....	.....	.....	.....	.....	Meteorological Obs.
Archangel	.....	.....	30.06	763.5	—20.6	—29.2	85	ESE	13	6	.....	.....	2	.....	.....	.....	.....	.....	Ogorodnikof.
Tiflis	28.61	726.6	30.06	763.5	43.5	6.4	42	NW	22	10	.....	.....	4	.....	.....	.....	.....	.....	Physical Observatory.
Astrakhan	.....	.....	29.82	757.5	33.8	1.0	79	SW	13	6	.....	.....	10	.....	.....	Blank	Blank	.....	Sebastianof.
Kasan	.....	.....	29.88	759.0	5.9	—14.5	91	S	13	6	.....	.....	10	.....	.....	.....	.....	Light snow.	Physical Cabinet.
Orenburg	.....	.....	30.38	771.7	— 4.2	—20.1	61	E	18	8	.....	.....	0	.....	.....	.....	.....	.....	Tschernischei.
Ekaterinburg	29.28	743.6	30.38	771.6	—18.4	—28.0	75	Calm	0	0	.....	.....	3	.....	.....	.....	.....	.....	Meteorological Obs.
Nukuss	.....	.....	30.07	763.7	32.0	0.0	90	N	2	1	.....	.....	8	.....	.....	.....	.....	.....	
Kasaly	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Bobrof.
Tashkend	28.60	726.5	30.40	772.1	35.6	2.0	18	.....	.....	.....	.....	.....	10	.....	.....	.....	.....	Raining	Michelson.
Barnaul	.....	.....	30.24	768.0	8.1	—13.3	72	Calm	0	0	.....	.....	10	.....	.....	.....	.....	.....	Meteorological Obs.
Yeniseisk	.....	.....	30.34	770.7	— 1.5	—18.6	64	SE	11	5	.....	.....	0	.....	.....	.....	.....	.....	Marks.
Irkutsk	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Usolzof.
Peking, (China)	.....	.....	30.48	774.3	14.0	—10.0	39	NW	13	6	.....	.....	0	.....	.....	.....	.....	.....	Physical Observatory.
Nertchinsk	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Meteorological Obs.
Vladivostock	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Nikolaievsk, on the Amoor	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

Note.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols; they omit the rain-fall. The elevation of Tiflis is 409 meters, or 1,341.8 feet; Ekaterinburg, 306. 4 ? m., or 1,005.2 ? ft.; Tashkend, 494.2 ? m., or 1,621.3 ? ft.; Irkutsk, 392 m., or 1,286 ft.; Nertchinsk, 592.0 ? m., or 1,942.2 ? ft.

SPANISH SERIES.

Furnished by the coöperation of Antonio Aguilar, Director of the Royal Observatory at Madrid, and of Don Cecilio Pujazon, Captain R. N. Director of the Naval Observatory at San Fernando.

Madrid	.....	.....	30.36	771.2	53.1	11.7	66	SW	2.2	1.00	.....	0	0	.....	.....	0	0	Clear	Royal Observatory.
San Fernando	.....	.....	30.41	772.5	52.9	11.6	83	NW	11.2	5.0	.....	1	3	W	W	.....	.....	.....	Naval Observatory.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

Note.—The originals give the weather in general terms, as published; rain-fall for San Fernando from preceding to following midnight; wind-velocity for Madrid in kilometers per hour.

SWEDISH SERIES.

Furnished by the coöperation of Professor R. Rubenson, Director of the Royal Swedish Meteorological Institute, at Stockholm, and of Dr. H. H. Hildebrandsson, Chief of the Meteorological Division of the Upsala Observatory.

Haparanda	.....	.....	29.78	756.5	2.1	—16.6	99	S	.....	.....	2	.....	4	.....	.....	0.12	3.	.....	
Umea	.....	.....	29.71	754.5	8.6	—13.0	92	NE	.....	.....	2	.....	10	.....	.....	0	0	.....	
Hernosand	.....	.....	29.67	753.6	14.0	—10.0	97	Calm	.....	.....	0	.....	10	.....	.....	0.020	0.5	.....	
Stockholm	.....	.....	29.64	752.9	25.5	— 3.6	87	Calm	.....	.....	0	.....	8	.....	.....	0	0	.....	
Wisby	.....	.....	29.71	754.6	28.4	— 2.0	84	NNW	.....	.....	4	.....	7	.....	.....	0	0	.....	
Sub-Series.																			
Upsala	.....	.....	29.65	753.2	20.3	— 6.5	88	E	2.9	1.3	.....	.....	2	N	NNW	0.000	0.01	.....	Dr. Hildebrandsson.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

Note.—The originals give the wind-force by the scale 0 to 6, and Upsala also velocity in meters per second; occasionally, the weather by the Vienna symbols, or in general terms; no distinction between the amount of upper and lower clouds. The rain-fall is measured at 8 a. m., local time.

SWISS SERIES.

Furnished by the coöperation of Professor R. Wolf, Director of the Observatory at Zurich, and of Professor E. Plantamour, Director of the Observatory at Geneva.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Geneva	28.76	730.6	30.20	767.0	52.3	11.3	61	S	.....	.....	1	.....	9	.....	.....	0	0	Covered	The Observatory.
Zurich	28.48	723.4	30.13	765.4	49.6	9.8	69	W	.....	.....	2	.....	10	.....	.....	0.031	0.8	Covered	The Observatory.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—For Geneva the corresponding departures from the normal values are: Barometer, +4.1 mm; Thermometer, +8.0 cent.; Relative Humidity, —11 per cent.

NOTE.—The rain-fall is measured at Zurich at 7 a. m. on the following day. The originals give the barometer corrected but not reduced to sea-level; the wind-force by the scale 0 to 4 for Zurich; the amount of cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The elevation of Geneva is 408 meters, or 1,339 feet, and that of Zurich 470 meters, or 1,542 feet.

TURKISH SERIES.

Furnished by the coöperation of A. Coumbary, Effendi, Director of the Central Observatory at Constantinople, and of Professor C. V. A. Van Dyck, Superintendent of the Lee Observatory at Beirut.

Constantinople	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Fao, (Persian Gulf)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Salonica	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Valona	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Varna	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
SUB-SERIES.																			
Beirut, (Syria,) Lee Obs'y	.....	.....	30.19	766.7	65.3	18.5	64	WSW	.....	.....	2	.....	5c,n	.....	SW	0.03	0.8	*D. clouds.....	Prof. C. V. A. Van Dyck.

NOTE.—The originals give the wind-force by the scale 0 to 7, (except Beirut, by the scale 0 to 12, and Constantinople velocity in meters per second;) the weather in general terms as published; no distinction between upper and lower clouds, and, except Constantinople and Beirut, the amount by the scale 0 to 4. It is assumed that the barometer is reduced to sea-level. * Detached clouds.

CANADIAN SERIES.

Furnished by the cooperation of Professor G. T. Kingston, Director of the Magnetic Observatory at Toronto, and Superintendent of the Meteorological Office of the Dominion of Canada, and the respective Observers. Those marked with a star (*) are also telegraphed daily to the office of the Chief Signal Officer, U. S. Army.

Bathurst, N. B	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Hon. J. Ferguson.
Brockville, Ontario	.....	.....	30.25	768.3	22	— 5.6	.....	Calm	0	0	.....	.....	Fog	.....	SW	0	0	Foggy	W. R. Bigg.
*Chatham, N. B	.....	.....	30.23	767.8	17	— 8.3	83	Calm	0	0	.....	2k	8ks	N	N	0	0	Cloudy	G. A. Blair.
Charlottetown, P. E. Island	.....	.....	30.20	767.1	9	—12.8	81	Calm	0	0	.....	5k	0	.....	.....	0	0	Fair.....	H. J. Cundall, C. E.
Cornwall, Ontario	.....	.....	30.36	771.1	13.9	—10.1	94	W	.....	.....	1	0	Fog	.....	.....	0	0	Bright.....	James Smith, M. A.
Dalhousie, N. B	.....	.....	.....	.....	9.8	—12.3	94	W	.....	.....	1	.....	.....	.....	.....	0	0	Very bright.	H. A. Johnson.
Esquimault, B. C	.....	.....	29.82	757.4	37.1	2.8	63	NE	.....	.....	.....	.....	10n	.....	.....	0.12	3.0	Cloudy.....	W. H. Bevis.
*Father Point, Quebec	.....	.....	30.29	769.4	16	— 8.9	91	N	2	0.9	.....	.....	10n	.....	.....	0.01	0.3	Cloudy	J. McWilliams.
Fredericton, N. B	.....	.....	30.28	769.1	10.1	—12.9	87	NW	6	2.7	.....	0	0	.....	.....	0	0	Clear	Prof. Harrison.
*Fort Garry, Manitoba	.....	.....	30.36	771.1	— 2	—18.9	97	N	13	5.8	.....	Haze	Haze	N	N	0.092	2.34	Clearing.....	James Stewart.
Goderich, Ontario	.....	.....	30.17	766.3	36.8	2.7	83	SW	.....	.....	2	5c	3s	W	.....	0	0	Fair.....	H. J. Strang, M. A.
Granton, Ontario	29.03	737.3	30.19	766.8	31.1	— 0.5	.....	S	.....	.....	1	0	0	.....	.....	0	0	Clear.....	James Grant.
*Halifax, N. S	.....	.....	30.19	766.8	19	— 7.2	92	NW	1	0.4	.....	.....	10n	.....	.....	Inap.	Inap.	Light snow..	F. Allison, M. A.
Hamilton, Ontario	.....	.....	30.35	770.9	31.7	— 0.2	83	SW	.....	.....	1	3c	0	W	.....	0	0	Clear	G. Dickson.
Heart's Content, N. F	.....	.....	29.89	759.2	18	— 7.8	84	NW	.....	.....	1	0	0	.....	.....	0	0	Fine.....	E. Weedon.
*Kingston, Ontario	.....	.....	30.28	769.1	23	— 5.0	100	Calm	0	0	.....	.....	Fog	.....	.....	0	0	Foggy	S. Woods, M. A.
*Montreal, Quebec	.....	.....	30.26	768.6	19	— 7.2	90	E	7	3.1	.....	0	Fog	.....	.....	0	0	Foggy.....	C. H. McLeod, C. E.
*Ottawa, Ontario	.....	.....	30.23	767.8	13	—10.6	71	E	2	0.9	.....	.....	Fog	.....	E	0	0	Foggy	J. B. Haney.
*Parry Sound, Ontario	.....	.....	30.16	766.1	25	— 3.9	75	S	8	3.6	.....	2cs	0	SE	.....	0	0	Fair	Rev. R. Mosley.
Port Dover, Ontario	.....	.....	30.24	768.1	26	— 3.3	88	SW	8	3.6	.....	0	0	.....	.....	0	0	Clear	H. Morgan.
Port Hastings, N. S	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Peter Grant.
Port Stanley, Ontario	.....	.....	30.25	768.3	26	— 3.3	94	SW	7	3.1	.....	2ck	0	.....	.....	0	0	Clear	M. Payne.
*Quebec, Quebec	.....	.....	30.29	769.4	18	— 7.8	84	Calm	0	0	.....	.....	10n	.....	.....	Inap.	Inap.	Cloudy.....	Capt. Ashe, R. N.
*Rockliffe, Ontario	.....	.....	30.21	767.3	22	— 5.6	100	Calm	0	0	.....	.....	10s	.....	NW	0	0	Foggy.....	
St. John, N. B	.....	.....	30.27	768.8	23	— 5.0	66	NW	1	0.4	.....	4ks?	0	.....	.....	0	0	Fair	G. Murdoch, C. E.
Saugeen, Ontario	.....	.....	30.12	765.0	30	— 1.1	84	SW	3	1.3	.....	5cs	0	.....	.....	0	0	Fair	K. Stewart.
Stayner, Ontario	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	R. J. Cole.
Stratford, Ontario	28.88	733.5	30.22	767.6	31.3	— 0.4	89	S	7	3.1	.....	0	0	.....	.....	0	0	Fine.....	C. J. MacGregor, M. A.
*Sydney, C. B	.....	.....	30.18	766.6	0	—17.8	100	S	1	0.4	.....	0	0	.....	.....	0	0	Clear	T. C. Hill.
*Toronto, Ontario	.....	.....	30.22	767.6	22	— 5.6	86	N	3	1.3	.....	2cs	0	W	.....	0	0	Clear	Magnetic Observatory.
Woodstock, Ontario	.....	.....	30.21	767.3	31.5	— 0.3	89	W	12	5.4	.....	0	3s	.....	.....	0	0	Fair.....	J. Montgomery.
SUB-SERIES.																			
St. Johns, Newfoundland	.....	.....	29.94	760.5	18.0	— 7.8	.....	W	.....	.....	.....	5c	5k	.....	.....	0.01	0.3	Fair	John Delany.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—The originals for Brockville, Charlottetown, Port Dover, Port Stanley, Stayner, St. Johns, N. F. and those telegraphed, give the amount of cloudiness by the scale 0 to 4. The elevation of Granton is 1,015 feet, or 309.4 m.; Stratford, 1,182 feet, or 360.3 m

UNITED STATES SERIES.

Furnished by the coöperation of Bvt. Brig. Gen. Albert J. Myer, Chief Signal Officer, U. S. Army.

STATIONS.	Barometer: Corrected for instrum'tal error and temperature. Inches.	Barometer: Corrected for instrum'tal error and temperature. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	*Weather	Observer.
Albany, N. Y.	.....	.....	30.26	768.6	23	— 5.0	72	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Alpena, Mich.	.....	.....	30.03	762.7	28	— 2.2	88	Calm	0	0	.....	2c	0	.....	.....	0	0	Fair	
Atlantic City, N. J.	.....	.....	30.29	769.4	29	— 1.7	89	W	6	2.7	.....	0	0	.....	.....	0	0	Clear	
Augusta, Ga.	.....	.....	30.33	770.4	36	2.2	85	NW	6	2.7	.....	0	0	.....	.....	0	0	Clear	
Baltimore, Md.	.....	.....	30.31	769.9	34	1.1	79	Calm	0	0	.....	Haze	2s,sm'	.....	.....	0	0	Smoky	
Barnegat, N. J.	.....	.....	30.27	768.8	32	0.0	74	NW	8	3.6	.....	2c	0	.....	.....	0	0	Clear	
Bismarck, Dakota	28.62	726.9	30.49	774.4	0	—17.8	69	NW	22	9.8	.....	0	0	.....	.....	Inap.	Inap.	Clear	
Boston, Mass.	.....	.....	30.24	768.1	29	— 1.7	78	NW	4	1.8	.....	1c	Sm'c	.....	.....	0	0	Clear	
Breckenridge, Minn.	.....	.....	30.36	770.9	2	—16.7	85	NW	20	8.9	.....	.....	10s	.....	NW	0	0	Cloudy	
Buffalo, N. Y.	.....	.....	30.21	767.3	30	— 1.1	78	SW	1	0.4	.....	0	0	.....	.....	0	0	Clear	
Burlington, Vt.	.....	.....	30.28	769.1	24	— 4.4	61	Calm	0	0	.....	2c	0	.....	.....	0	0	Fair	
Cairo, Ill.	.....	.....	30.35	770.9	38	3.3	90	Calm	0	0	.....	2c	Fog	.....	.....	0	0	Fair	
Cape Hatteras, N. C.	.....	.....	30.21	767.3	43	6.1	83	NE	18	8.0	.....	0	0	.....	.....	0	0	Clear	
Cape Henry, Va.	.....	.....	30.32	770 1	39	3.9	86	N	6	2.7	.....	0	0	.....	.....	0	0	Clear	
Cape Lookout, N. C.	.....	.....	30.27	768.8	42	5.6	91	NE	13	5.8	.....	0	1s	.....	.....	0	0	Clear	
Cape May, N. J.	.....	.....	30.29	769.4	36	2.2	80	W	12	5.4	.....	0	0	.....	.....	0	0	Clear	
Charleston, S. C.	.....	.....	30.26	768.3	44	6.7	45	N	16	7.2	.....	1c	0	N	.....	0	0	Clear	
Cheyenne, Wyoming	24.12	612.6	30.06	763.5	14	—10.0	83	NW	12	5.4	.....	8ck	2s	SW	.....	0	0	Cloudy	
Chicago, Ill.	.....	.....	30.13	765.3	40	4.4	73	SW	12	5.4	.....	0	0	.....	.....	0	0	Clear	
Cincinnati, Ohio.	.....	.....	30.32	770.1	33	0.6	79	SE	2	0.9	.....	0	0	.....	.....	0	0	Clear	
Cleveland, Ohio.	.....	.....	30.28	769.1	36.5	2.5	62	SE	8	3.6	.....	.....	Haze	.....	.....	0	0	Fair	
Corsicana, Tex.	.....	.....	30.24	768.1	44	6.7	75	S	3	1.3	.....	.....	10s	.....	.....	0	0	Cloudy	
Davenport, Iowa.	.....	.....	30.17	766.3	30	3.9	71	SW	8	3.6	.....	0	4s	.....	SW	0	0	Fair	
Denison, Tex.	.....	.....	30.23	767.8	44	6.7	75	SE	4	1.8	.....	.....	10s	.....	S	0	0	Cloudy	
Denver, Col.	24.92	633.0	30.14	765.5	25	— 3.9	88	N	6	2.7	.....	.....	10s	.....	.....	0	0	Cloudy	
Detroit, Mich.	.....	.....	30.20	767.1	34	1.1	79	SW	6	2.7	.....	1c	0	SW	.....	0	0	Clear	
Dodge City, Kan.	27.45	697.2	29.76	755.9	45	7.2	84	W	14	6.3	.....	.....	10s	.....	.....	0	0	Cloudy	
Dubuque, Iowa.	.....	.....	30.08	764.0	39	3.9	82	Calm	0	0	.....	.....	10s	.....	.....	0	0	Cloudy	
Duluth, Minn.	.....	.....	29.88	758.9	32	0.0	89	W	13	5.8	.....	.....	10s	.....	W	0	0	Cloudy	
Eastport, Me.	.....	.....	30.19	766.8	26	— 3.3	81	N	7	3.1	.....	0	0	.....	.....	0	0	Clear	
Erie, Pa.	.....	.....	30.22	767.6	38	3.3	71	S	10	4.5	.....	1c	Haz.	.....	.....	0	0	Clear	
Escanaba, Mich.	.....	.....	29.91	759.7	28	— 2.2	83	S	6	2.7	.....	2cs	2s	.....	.....	0	0	Fair	
Fort Gibson, Indian Ter.	.....	.....	30.20	767.1	46	7.8	61	SE	5	2.2	.....	8ck	0	SW	.....	0	0	Fair	
Ft. St. Michael, Alaska	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Fort Sill, Indian Ter.	28.99	736.3	30.13	765.3	46	7.8	77	S	8	3.6	.....	.....	10n	.....	.....	Inap.	Inap.	Cloudy	
Fort Sully, Dakota.	28.64	727.4	30.48	774.2	13	—10.6	81	NW	20	8.9	.....	2ck	0	NW	.....	0	0	Fair	
Florence, Arizona.	28.41	721.6	29.92	760.0	57	13.5	.....	SW	.....	.....	.....	.....	10n	.....	SW	0.51	13.0	Raining	
Galveston, Tex.	.....	.....	30.30	769.6	54	12.2	93	E	4	1.8	.....	5cs	0	W	.....	0	0	Fair	
Grand Haven, Mich.	.....	.....	30.10	764.5	38	3.3	80	S	24	10.7	.....	2c	1s	W	.....	0	0	Fair	
Indianapolis, Ind.	.....	.....	30.32	770.1	35	1.7	80	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Indianola, Tex.	.....	.....	30.25	768.3	57	13.5	87	E	12	5.4	.....	.....	10s	.....	.....	0	0	Cloudy	
Jacksonville, Fla.	.....	.....	30.19	766.8	43	6.1	58	NW	5	2.2	.....	5cs	0	NW	.....	0.14	3.6	Fair	
Keokuk, Iowa.	.....	.....	30.10	764.5	42	5.6	83	SW	10	4.5	.....	0	0	.....	.....	0	0	Clear	
Key West, Fla.	.....	.....	30.18	766.6	57	13.9	81	N	20	8.9	.....	0	5ks	.....	.....	0	0	Fair	
Kittyhawk, N. C.	.....	.....	30.33	770.4	40	4.4	91	NE	18	8.0	.....	0	0	.....	.....	0	0	Clear	
Knoxville, Tenn.	.....	.....	30.39	771.9	31	— 0.6	89	Calm	0	0	.....	.....	Fog	.....	.....	0.04	1.0	Dense fog	
La Crosse, Wis.	.....	.....	29.97	761.2	42	5.6	74	S	10	4.5	.....	.....	10s	.....	S	0	0	Cloudy	
Leavenworth, Kan.	.....	.....	30.10	764.5	40	4.4	83	S	4	1.8	.....	.....	10s	.....	.....	0	0	Cloudy	
Louisville, Ky.	.....	.....	30.38	771.6	34	1.1	79	SE	1	0.4	.....	0	fg',sm	.....	.....	0	0	Clear	
Lynchburg, Va.	.....	.....	30.37	771.4	28	— 2.2	88	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Malone, N. Y.	.....	.....	30.20	767.1	26	— 3.3	76	S	3	1.3	.....	2c	0	W	.....	0	0	Fair	
Marquette, Mich.	.....	.....	29.84	757.9	35	1.7	70	SW	8	3.6	.....	0	0	.....	.....	0	0	Clear	
Memphis, Tenn.	.....	.....	30.37	771.4	39	3.9	80	S	1	0.4	.....	5c	Sm'c	SW	.....	0	0	Fair	
Milwaukee, Wis.	.....	.....	30.06	763.5	40	4.4	72	SW	10	4.5	.....	0	2s	.....	.....	0	0	Clear	
Mobile Ala.	.....	.....	30.36	771.1	41	5.0	74	N	5	2.2	.....	0	Fog	.....	.....	0	0	Clear	
Montgomery, Ala.	.....	.....	30.39	771.9	41	5.0	87	N	4	1.8	.....	0	Fog	.....	.....	0	0	Clear	
Morgantown, W. Va.	29.23	742.4	30.35	770.9	30	— 1.1	68	W	3	1.3	.....	0	0	.....	.....	0	0	Clear	
Mt. Washington, N. H.	23.77	603.8	30.13	765.3	17	— 8.3	83	NW	24	10.7	.....	0	0	.....	.....	0	0	Clear	
Nashville, Tenn.	.....	.....	30.39	771.9	32	0.0	79	Calm	0	0	.....	0	Fog	.....	.....	0	0	Clear	
New Haven, Conn.	.....	.....	30.14	765.5	36	2.2	70	SW	10	4.5	.....	Haze	0	.....	.....	0	0	Clear	
New London, Conn.	.....	.....	30.25	768.3	30	— 1.1	78	N	4	1.8	.....	1c	Haze	W	.....	0	0	Clear	
New Orleans, La.	.....	.....	30.32	770.1	49	9.4	57	NE	3	1.3	.....	5c	0	W	.....	0	0	Fair	
Newport, R. I.	.....	.....	30.25	768.3	32	0.0	69	N	7	3.1	.....	0	0	.....	.....	0	0	Clear	
New York, N. Y.	.....	.....	30.27	768.8	35	1.7	69	NE	1	0.4	.....	5cs	Sm'c	W	.....	0	0	Fair	
Norfolk, Va.	.....	.....	30.34	770.6	35.5	1.9	95	NE	2	0.9	.....	0	Fog	.....	.....	0	0	Clear	
North Platte, Neb.	27.28	692.9	30.01	762.2	24	— 4.4	80	NW	24	10.7	.....	.....	10ks	.....	NW	0	0	Threatening	
Omaha, Neb.	28.99	736.3	30.12	765.0	32	0.0	79	N	18	8.0	.....	.....	10s	.....	N	0	0	Cloudy	
Oswego, N. Y.	.....	.....	30.24	768.1	26	— 3.3	88	SE	6	2.7	.....	Haze	Haze	.....	.....	0	0	Fair	
Pembina, Dakota.	.....	.....	30.36	771.1	— 5	—20.6	100	NW	28	12.5	.....	.....	10s	.....	.....	0	0	Cloudy	
Philadelphia, Pa.	.....	.....	30.30	769.6	33	0.6	69	NW	4	1.8	.....	0	Sm'c	.....	.....	0	0	Clear	
Pike's Peak, Col.	17.00	447.0	29.80	756.9	3	—16.1	46	SW	28	12.5	.....	2s	0	.....	.....	0	0	Fair	
Pittsburgh, Pa.	.....	.....	30.30	769.6	29	— 1.7	88	Calm	0	0	.....	0	Fog	.....	.....	0	0	Clear	
Port Huron, Mich.	.....	.....	30.17	766 3	33	0.6	89	S	9	4.0	.....	5cs	Haze	NW	.....	0	0	Fair	
Portland, Me.	.....	.....	30.22	767.6	24	— 4.4	74	Calm	0	0	.....	1c	Haze	NW	.....	0	0	Clear	
Portland, Oregon.	.....	.....	29.79	756.7	39	3.9	88	SE	12	5.4	.....	.....	8s	.....	.....	0	0	Cloudy	
Punta Rassa, Fla.	.....	.....	30.20	767.1	52.5	11.4	53	N	22	9.8	.....	0	0	.....	.....	0	0	Clear	
Rochester, N. Y.	.....	.....	30.21	767.3	30	— 1.1	73	SW	10	4.5	.....	0	Haze	.....	.....	0	0	Clear	
Salt Lake City, Utah.	25.66	651.8	29.99	761.7	19	— 7.2	84	E	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Sandy Hook, N. J.	.....	.....	30.23	767.8	36	2.2	70	NW	6	2.7	.....	0	0	.....	.....	0	0	Clear	
San Diego, Cal.	.....	.....	29.92	760.0	51	10.6	71	NE	4	1.8	.....	0	2s	.....	NE	0	0	Clear	
San Francisco, Cal.	.....	.....	29.92	760.0	48	8.9	77	W	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Santa Fé, N. M.	23.18	588.8	29.72	754.9	32	0.0	89	N	4	1.8	.....	.....	10s	.....	.....	0.03	0.8	Cloudy	
Savannah, Ga.	.....	.....	30.24	768.1	43	6.1	58	NE	15	6.7	.....	1c	Haze	E	.....	0	0	Clear	
Shreveport, La.	.....	.....	30.36	771.1	43	6.1	92	Calm	0	0	.....	.....	10s	.....	.....	0	0	Cloudy	
Smithville, N. C.	.....	.....	30.25	768.3	40	4.4	83	N	15	6.7	.....	0	0	.....	.....	0	0	Clear	
Springfield, Mass.	.....	.....	30.28	769.1	25.5	— 3.6	68	NE	1	0.4	.....	0	Haze	.....	.....	0	0	Clear	
St. Louis, Mo.	.....	.....	30.27	768.8	42	5.6	74	S	7	3.1	.....	0	0	.....	.....	0	0	Clear	
St. Marks, Fla.	.....	.....	30.30	769.6	39	3.9	96	N	6	2.7	.....	0	0	.....	.....	0	0	Clear	
St. Paul, Minn.	.....	.....	30.03	762.7	24	— 4.4	87	W	12	5.4	.....	.....	10s	.....	.....	0	0	Cloudy	
St. Paul's Island, Alaska.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Thatcher's Island, Mass.	.....	.....	30.26	768.6	31	— 0.6	68	N	8	3.6	.....	1c	0	NW	.....	0	0	Clear	
Toledo, Ohio.	.....	.....	30.23	767.8	39	3.9	72	W	9	4.0	.....	5c	Haze	W	.....	0	0	Fair	
Tucson, Arizona.	27.46	697.5	30.01	762.2	44	6.7	.....	SW	.....	.....	.....	0	5ks	.....	SW	1.36	34.5	Fair	
Tybee Island, Ga.	.....	.....	30.22	767.6	45	7.2	60	NE	24	10.7	.....	5k	0	NE	.....	0	0	Fair	
Vicksburg, Miss.	.....	.....	30.36	771.6	46	7.8	64	E	7	3.1	.....	5cs	Sm'c	W	E	0	0	Fair	
Virginia City, M. T.	24.29	617.0	29.77	756.1	3	—16.1	86	Calm	0	0	.....	0	0	.....	.....	0.17	4.3	Clear	
Washington, D. C.	.....	.....	30.34	770.6	28	— 2.2	88	Calm	0	0	.....	0	Sm'c	.....	.....	0	0	Smoky	
Wilmington, N. C.	.....	.....	30.27	768.8	39	3.9	72	N	14	6.3	.....	1cs	0	E	.....	0	0	Clear	

UNITED STATES SERIES.—Continued.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Upper. 0—10.	Clouds. Amount. Low'r. 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Wood's Holl, Mass.	.....	.....	30.25	768.3	30	— 1.1	68	N	0	2.7	.....	0	0	.....	.....	0	0	Clear	
Yankton, Dakota	28.96	735.6	30.34	770.6	25	— 3.9	75	NW	22	9.8	.....	.....	10s	.....	NW	0	0	Cloudy	
Yuma, Arizona	.....	.....	29.94	760.5	54	12.2	.....	W	.....	.....	.....	.....	10n	.....	.....	1.51	38.4	Heavy rain.	
Sub-Series.																			
Kingston, Jamaica, W. I.	.....	.....	30.17	766.3	75	23.9	76	N	10	4.5	.....	2c	2s	.....	.....	0.05	1.3	.....	James Gall.
Navassa, W. I.	.....	.....	.....	.....	77	25.0	.....	WNW	.....	.....	2	.....	.....	.....	.....	0	0	.....	Dr. G. H. Davison.
Clifton, Ja., W. I.	27.18	690.4	29.98	761.5	62	16.7	88	N	1.0	0.4	.....	0	0	.....	.....	0	0	Fine	C. Partridge.
Paramaribo, D. Guiana, S.A	.....	.....	30.02	762.5	80	26.7	82	E	.....	.....	3	5c,k	7ks	E	.....	0	0	½ cloudy	C. J. Hering.
Batavia, Dutch Guiana, S.A.	30.07	763.8	.....	.....	78.8	26	.....	NE	.....	.....	.....	.....	.....	.....	.....	0.118	3.00	Rainy	Dr. H. Groot.
Medellin, Colombia, S. A.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0	0	.....	Thomas Herran.
York Factory, B. A.	.....	.....	30.56	776.2	—28.0	—33.3	.....	W	8	3.6	.....	0	1s	.....	W	0	0	Fair	J. Fortescue, W. Wood.
Honolulu, Oahu, H. I.	.....	.....	30.11	764.8	70	21.1	95	NE	.....	.....	2	.....	.....	.....	.....	0.94	23.9	.....	Daniel Smith.
Makawao, Maui, H. I.	.....	.....	29.94	760.5	58	14.4	76	NE	.....	.....	1	0	5k	.....	.....	0	0	.....	F. L. Clarke.

Note.—The originals give the amount of cloudiness by the scale 0 to 4, except York Factory, Makawao, Medellin and Paramaribo. The elevation of the barometer at Bismarck is 1,677 feet, or 511.1 meters: Cheyenne, 6,057.3 ft., or 1,846.2 m.; Clifton, about 2,897 ft., or 883.5 m.; Denver, 5,135 ft., or 1,565.2 m.; Dodge City, 2486ft., or 757.6 m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Florence, 1,550 (?) ft., or 472.5 (?) m.; Makawao, 2,205 ft., or 672.1 m.; Morgantown, 1,027.9 ft., or 313.3 m.; Medellin, 4,876 ft., or 1,486.2 m.; Mt. Washington, 6,285 ft., or 1,915.6 m.; North Platte, 2,846 ft., or 867.4 m.; Omaha, 1,054.6 ft., or 321.4 m.; Pike's Peak, 14,160.7 ft., or 4,318.1 m.; Salt Lake City, 4,362.2 ft., or 1,329.6 m.; Santa Fé, 6,862.2 (?) ft., or 2,091.6 (?) m.; Tucson, 2,545 (?) ft., or 775.7 (?) m.; Virginia City, 5,480 (?) ft., or 1,670.3 (?) m.; Yankton, 1,278 ft., or 389.5 m. The following constants are added in correcting the barometric observations for altitude: Cheyenne, 5.04 inches; Denver, 5.22 in.; Makawao, 2.170 in.; Mt. Washington, 6.86 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fé, 6.54 in.; Tucson, 2.59 in.; Virginia City, 5.48 in. The elevation of Batavia is about 6 feet; the barometric readings need the addition of 0.2 mm. or 0.01 in. for reduction to sea-level.

UNITED STATES NAVAL SERIES.

By authority of the **SECRETARY OF THE NAVY.**

Furnished by the coöperation of the Navy Department, through Commodore Daniel Ammen, U. S. N., Chief of Bureau of Navigation.

STATIONS AND VESSELS.	True course toward—	Hourly rate in knots.	*Barometer as reported.		Temperature of the Air.		Relative Humidity.	Wind.				Clouds.				Rain-fall or melted snow in the past 24 hours.		State of Ocean.	Direction of swell from—	Weather.	OBSERVER.
								Direction.	Velocity		Force.	Amount.		Direction.							
			Inches.	Millimeters.	Fahrenheit.	Centigrade.	Per cent.	From—	Miles per hour.	Meters per second.	0—10.	Up'er 0—10.	Low'r —10.	Up'er From—	Low'r From—	Inches.	Millimeters.				
Naval Academy, Annapolis, Md.			29.93	760.2	28	— 2.2		N				0–1	1		SE	0	0			Clear	
Naval Hospital, Annapolis, Md.			30.30	769.6	30	— 1.1	68	SW				1	0			0	0			Clear	
Navy Yard, Mare Island, Cal.			30.08	764.0	43	6.1	100	S				1	0?							Rainy?	
Navy Yard, Norfolk, Va.			30 44†	773.2†	30	— 1.1	100	Calm				0	10n							Misty	
Navy Yard, Pensacola, Fla.			30.27	768.8	46.5	8.1	94	N				2	2			0	0			‡D. clouds	
Navy Yard, Portsmouth, N.H.			30.22	767.6	19	— 7.2		NW				1								Clear	
¶ Canonicus, New Orleans, La.			30.27	768.8	44	6.7	92	NE				1	2		E					Fair	
Colorado, New York, N. Y.			30.30	769.6	34.5	1.4		NNE				1	5			0	0			Hazy	
Essex, N. 25°, 30′, W. 80°, 12′			30.14	765.5	57	13.9		NW				3	1					Gentle.	N	‡D. clouds	
Hartford, Hampton Roads, Va.			30.40	772.1	37	2.8		NW				1	1			0	0			Pleasant	
Lackawana, Mare Island, Cal.			30.07	763.8	51	10.6	79	NNW				1–2			SSE					Wet	
Marion, Port Said, Egypt			30.12	765.0	63	17.2	100	NW				2	3		E			Smooth		‡D. clouds	
Michigan, Erie, Pa.			30.14	765.5	36	2.2	90	SE				1	2							Hazy	
Monongahela, Baltimore, Md.			30.20	768.0	31	— 0.6		Calm				0	0							Hazy	
New Hampshire, Port Royal, S. C.			30.38	771.0	48	8.9		NNE				3–5	4		SE			Smooth		‡D. clouds	
Omaha, Panama			30.05	763.3	74.0	23.6	93	NW				2	2		S	0	0	Smooth		Pleasant	
Ossipee, New Orleans, La.			30.25	768.3	46	7.8		ENE				1	0							Hazy	
Pensacola, Panama			30.06	763.5	77	25.0	91	NW				2	2							Pleasant	
Plymouth, New Orleans, La.			30.12	765.0	52	11.1	73	NE				2	3		NW					Pleasant	
¶ Rio Bravo, Matamoras, Mex.			30.12	765.0	59	15.0	94	SE				1	9		SE					Thunder	
Santee, Annapolis, Md.			29.86†	758.4†	32	0.0		N				0–1	1		SE					Clear	
St. Louis, League Island, Pa.			30.08	764.0	34	1.1		SW	1	0.5			1		SW	0	0			Fair	
Vandalia, Constantinople, Turkey.			29.94	760.5	54	12.2	93	SW				4	3		NE					Squally	
Wabash, Boston, Mass.			30.30	769.6	33	0.6		NNW				0–1	5							Hazy	
Wyoming, Washington, D.C.			30.23	767.8†	29	— 1.7		Calm				0								‡D. clouds	

* It is not known that the barometer is corrected for temperature, instrumental error or elevation. † Aneroid Barometer. ‡ Detached clouds. ¶ Barometer corrected for instrumental error and reduced to sea-level.

UNITED STATES MARINE SERIES

REPORTED TO THE OFFICE OF THE CHIEF SIGNAL OFFICER OF THE ARMY.

NAMES OF VESSELS.	True course toward—	Hourly rate in knots.	Barometer reduced to sea-level.		Temperature of the Air.		Relative Humidity.	Wind.				Clouds.				State of Ocean.	Direction of swell from—	Weather.	OBSERVER.
								Direction.	Velocity.		Force.	Amount.		Direction.					
												Up'er	Low'r	Upper.	Lower.				
			Inches.	Millimeters.	Fahrenheit.	Centigrade.	Per cent.	From—	Miles per hour.	Meters per second.	0—10.	0—10.	0—10.	From—	From—				
PACIFIC MAIL S. S. CO. MARINE SERIES.																			
Furnished by the coöperation of ———, President; Williams, Blanchard & Co., Agents.																			
S. S. City of Peking																			Lt. Z. L. Tanner, U.S.N
OCCIDENTAL AND ORIENTAL S. S. CO. MARINE SERIES.																			
Furnished by the coöperation of George H. Bradbury, President; T. H. Goodman, Agent.																			
S. S. Belgic																			Capt. John Metcalf.
S. S. Gaelic																			Capt. W. H. Kidley.
S. S. Oceanic																			Capt. H. Parsell.
NORTH GERMAN LLOYD OF BREMEN MARINE SERIES.																			
Furnished by the coöperation of A. Schumacher & Co., Agents.																			
S. S. Baltimore																			Capt. H. Andressen.
S. S. Berlin																			Capt. C. Pohle.
S. S. Braunschweig																			Capt. K. Undütsch.
S. S. Nürnberg N. 38°, 18′, W. 64°, 43′	ENE ¾E		30.08	764.0	48.9	9.4		NE			4		k		NE	Light scat.	NE	Raining	Capt. A. Jaeger.
S. S. Ohio																			Capt. G. Meyer.
MARINE SERIES. (Miscellaneous.)																			
Furnished by the coöperation of Captain James Jorgensen.																			
Schooner Addie Fuller, at Brunswick, Ga			30.13	765.3	45	7.2	68	NNE	10	4.5		2cs	0					Clear	Capt. James Jorgensen

NOTE.—The schooner Addie Fuller gives the amount of cloudiness by the scale 0 to 4.

COLLATED AT THE OFFICE OF THE CHIEF SIGNAL OFFICER OF THE ARMY, WASHINGTON, D. C.

The records which appear in this Bulletin are copied from the regular exchanges of this office, made in each instance in compliance with an especial reques and are published for the uses of the coöperating observers. The barometric readings in the first two columns are reduced to freezing and their respective standards; those in the second two also to mean sea-level. The "weather" is generally published as given.

When the distinction between the upper and lower strata of clouds is not reported, the *kinds* or *types*, viz: cirrus, cumulus, stratus, nimbus, scud, fracto, pallio, haze, fog and smoke, as indicated, respectively, by the letters c, k, s, n, d, f, p, hz., fg. and sm'e, are generally published with the amount in the lower-cloud column. The distinction between the upper and lower strata is carefully made in the United States Series and a portion of the Canadian Series, and the types are indicated by the above letters or their combinations in the proper column.

Albert J. Myer

Brig. Gen. (Bvt. Assg^{d}.) Chief Signal Officer, U. S. A.

BULLETIN

OF

INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON FEBRUARY 12, 1877.

7:35 A. M. WASHINGTON mean time.

6:7 A. M. MEXICO mean time.
7:7 A. M. SAN JOSE mean time.
0:6 P. M. LISBON mean time.
0:28 P. M. MADRID mean time.
0:43 P. M. GREENWICH mean time.
0:53 P. M. PARIS mean time.
1:1 P. M. BRUSSELS mean time.
1:4 P. M. UTRECHT mean time.
1:13 P. M. BERNE mean time.
1:20 P. M. CHRISTIANIA mean time.
1:33 P. M. COPENHAGEN mean time.
1:33 P. M. ROME mean time.
1:37 P. M. BERLIN mean time.
1:49 P. M. VIENNA mean time.
1:55 P. M. STOCKHOLM mean time.
2:18 P. M. ATHENS mean time.
2:39 P. M. CONSTANTINOPLE mean time.
2:44 P. M. ST. PETERSBURG mean time.
6:36 P. M. CALCUTTA mean time.
10:2 P. M. TOKEI mean time.

ALGERIAN SERIES.

Furnished by the coöperation of General d'Eudeville, Commandant Supérieur du Génie in Algeria.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Nemours			30.43	773.0	66.4	19.1		SSE			2		1			0	0	Clear	Michel.
Algiers			30.39	772.0	62.2	16.8		WSW			1		3			0	0	Fair	Biscarrat.
La Calle			30.28	769.2	59.0	15.0		NNW			3		3			0	0	Fair	Fleury.
Tunis			30.30	769.6	59.4	15.2		NW			4		2			0.039	1.0	Clear	Jacques.
Sfax																			
Saidd			30.36	771.1	59.5	15.3		NW			2		1			0	0	Clear	Millot.
Tebessa			30.30	769.5	48.4	9.1		N			2		0			0	0	Clear	Bourgeois.
Geriville			30.31	769.9	46.8	8.2		NNW			2		1			0	0	Clear	Lemaillot.
Laghouat			30.35	770.9	60.8	16.0		N			1		1			0	0	Clear	Guyot.
Biskra			30.30	769.7	68.0	20.0		NE			3		3			0	0	Fair	Kuntz.

NOTE.—In the originals the distinction between the amount of upper and lower clouds is apparently not made. The weather is published as given. The rain-fall is measured at 7 a. m., local time.

AUSTRIAN SERIES.

Furnished by the coöperation of Professor Dr. Julius Hann, Director of the Imperial and Royal Central Meteorological Institute at Vienna.

Agram			29.88	759.0	52.7	11.5	60	NW			3		8			0	0		Prof. Ivan Stozir.
Cracow, I. R. Observatory			29.65	753.0	39.2	4.0	95	W			5		8			0.043	1.1		Dr. Wierzbiski.
Eperies			29.52	749.7	37.4	3.0	59	W			3		5cks		E	0	0		Julius Mikolik.
Gratz	28.59	726.1	29.83	757.6	54.0	12.7	40	WSW			4		5			0	0		Andreas Rospini.
Hermannstadt	28.34	719.9	29.80	756.9	39.2	4.0	92	WNW			3		10			0.081	2.05	Raining	Prof. Reissenberger.
Kronsmünster	28.52	724.3	29.87	758.7	46.8	8.2	70	W			8		10			0.807	20.5		Prof. C. Wagner.
Lemberg			29.35	745.6	37.9	3.3	66	SW			5		5			Blank	Blank		Dr. T. Stanecki.
Nyiregyhaza																			Habzsuda Daniel.
Pola			30.02	762.4	53.2	11.8	78	S			1		10cs			0	0		I.R. Hydrographic Office.
Szegedin			29.82	757.3	50.7	10.4	75	W			2		8			0	0		Karl Stancel.
Trieste			30.08	762.7	48.2	9.0	93	Calm			0		10			0	0	Foggy	Prof. V. Farolfi.
Vienna			29.85	758.2	39.4	4.1	88	N			4		10			0.480	12.2	Graupelnd.	I. R. Central Met. Obs'y.

NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 7 p. m., local time. The elevation of Gratz is 343.5 meters, or 1,126.9 feet; Hermannstadt, 407.8 meters, or 1,337.9 feet; Kronsmünster, 383.6 meters, or 1,258.5 feet.

BELGIAN SERIES.

Furnished by the coöperation of J. C. Houzeau, Director of the Royal Observatory at Brussels.

Arlon			29.96	760.9	45.0	7.2	90	SW			4		10			0.256	6.5	Raining	Royal Observatory.
Brussels			29.84	758.0	48.4	9.1	81	WSW			4		10n		WSW	0.110	2 80	Covered	
Furnes			29.79	756.6	47.7	8.7	93	WSW			6		8			0.146	3.7		
Maeseyck			29.83	757.6	48.2	9.0	86	SW			6		10			0.114	2.9		

NOTE.—In the originals, the weather is occasionally given in general notes.

BRITISH SERIES

Furnished by the coöperation of Robert H. Scott, Esq., Director of the Meteorological Office, London, Alexander Buchan, Secretary of the Scottish Meteorological Society, Edinburgh, and the respective Observers.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Aberdeen			29.41	747.0	35.0	1.7		SSE	19	8.5			10			0.190	4.83	Snowing	William Boswell.
Ardrossan			29.47	748.5	46	7.8		W			6							Squally	William McNeil.
Armagh, Observatory			29.61	752.1	47.5	8.6		WSW	12	5.4			5					*D. clouds	S. Call, for Dr. Robinson.
Bidston (Liverpool Obs.)			29.59	751.6	47.0	8.3		W	30	13.4			8					Overcast	John Hartnup.
Birr Castle, (Parsonstown)			29.70	754.4	47.9	8.8		WSW			1-3		8					*D. clouds	J. Dreyer.
Bradford			29.51	749.5	47.2	8.4		W			4		2			0.17	4.3	*D. clouds	J. McLandsborough.
Bridgetown, (Barbados)			30.03	762.7	79.0	26.1		NE			3		6					*D. clouds	Sergt. J. F. Halunen, A.
Cambridge, Observatory			29.62	752.3	51.0	10.6		SW			2-3		10					Overcast	H. Todd. [H.C.
Cardington			29.04	752.8	51.4	10.8		SW			4		10					Overcast	John McLaren.
Carlisle																			T. Bell, for J. Cartmell.
Chatham, School M. E.			29.82	757.4	50.2	10.1		SW			4		6					Drizzling	Capt. Fellows, R. E.
Dartmoor	28.36	720.3	29.87	758.7	45.2	7.3		W			6		6					*D. clouds	R. E. Power.
Davos Platz, (Switzerland)	24.87	631.7			38.0	3.3	59	SE			1		5			0.587	14.81	Hazy	Francis Redford, M. A.
Donaghadee			29.55	750.6	48	8.9		W			4		8					*D. clouds	J. Mac Gowan.
Dover			29.74	755.4	48	8.9		WSW			5		10					Raining	J. Costello.
Eccles, (near Manchester)			29.57	751.1	48.2	9.0		WNW	4.8	2.1			10					Squally	Thomas Mackereth.
Falmouth, Observatory			29.88	758.9	51.6	10.9		WSW			4		9					Overcast	The Staff.
Fort Napier, (Natal)	27.63	701.8	29.87	758.7	75.2	24.0		N			3		10					Overcast	P'vt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.93	760.2	90	32.2		W			0		3					*D. clouds	
Galway, Queen's College			29.64	752.8	49	9.4		W			4		10					Gloomy	Prof. A. H. Curtis.
Gibraltar, (Mediterranean)			30.41	772.4	64.6	18.1		W			5		1					*D. clouds	Corpl. C. Aitken, A.H.C.
Glasgow, Observatory			29.44	747.8	43.0	6.1		W			1		4					*D. clouds	Lewis Stuart.
Great Yarmouth			29.61	752.1	47	8.3		SW			3		8					Rain & fog	G. T. Watson.
Greenwich, Royal Obs'y			29.69	754.1	51.8	11.0		WSW			4		10					Raining	The Staff, for G. B. Airy.
Guernsey			29.88	758.9	53	11.7		SW			6		10					Drizzling	Dr. S. E. Hoskins.
Helston			29.91	759.7	53	11.7		NW			4		8k			0.20	5.1	Fair	M. P. Moyle.
Holyhead			29.66	753.4	49	9.4		W			4		3					*D. clouds	John Tilston.
Kew, Observatory			29.70	754.4	51.6	10.9		SW	22	9.8			10d		SW			Threatening	The Staff.
Kingstown			29.66	753.4	49	9.4		W			4		5					*D. clouds	George Mitchell.
Leicester Museum			29.62	752.3	50.8	10.4		W			5		10					Overcast	Wm. J. Harrison, F.G.S.
Malta, (Mediterranean)			30.18	766.6	58.6	14.4		W			2		10					Overcast	Corp'l. P. Bravis, A.H.C.
Nairn			29.35	745.7	40	4.4		ESE			1		10					Overcast	W. D. Penny.
Nassau, (Bahamas)			30.00	762.0	70.2	21.2		NW			7		6					Gloomy	Surg. Maj. Henry.
Nottingham, Observatory			29.60	751.8	48.1	8.9		WNW			3		10k,d		WNW	0.141	3.58	Overcast	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			29.60	751.8	48.7	9.3		W			5		10			Hail	Hail	Overcast	Rev. Stephen Whitty.
Oxford, Radcliffe Obs'y			29.65	753.1	53	11.7		W			3		10					Drizzling	J. Lucas.
Plymouth			29.83	757.7	52	11.1		W			3		10					Overcast	John Merrifield.
Roche's Point			29.78	756.4	51	10.6		WNW			4		5					Cloudy	W. Kennedy.
Saint Ann's Head			29.75	755.6	49	9.4		WNW			6		6					*D. clouds	John C. Walker.
Saint Helier, (Jersey)			29.91	759.7	51.2	10.7		WSW			6		10					Raining	A. P. Amy.
Sandwick Manse, (Orkneys)			29.40	746.7	34	1.1		SE	36	16.1			10					Snowing	Rev. C. Clouston, LL. D.
Scarborough																			F. Shaw.
Scutari Cemetery, (Turkey)			29.94	760.5	61.2	10.7		S			1		9					Gloomy	Sergt. W. H. Lyne.
Sheffield			29.54	750.3	50.0	10.0		SW			2		9			0.015	0.38	Overcast	W. F. Cooper.
Silloth Rectory			29.52	749.8	45.5	7.5	84	NW			3		6			0.067	1.6	*D. clouds	Rev. Francis Redford
Stonyhurst, Observatory			29.55	750.6	45.8	7.7		W			5		9					Hazy	Rev. S. J. Perry.
Stornoway, Lews C., (Hebr.)			29.28	743.7	41	5.0		SW			4		5					*D. clouds	John Smith.
Stratfield Turgiss			29.72	754.9	51.6	10.9		SW			1		10					Raining	Rev. Charles H. Griffith.
Thurso			29.38	746.2	35	1.7		SSE			5		10					Snowing	John Trotter.
Truro, Royal Institution			29.87	758.7	55	12.8		W			7		8					Gloomy	W. Newcombe.
Valencia, Observatory			29.79	756.7	49.5	9.7		W	24	10.7			10					Overcast	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man)																			Henry Mercer.
Cape Good Hope, Obs'y			30.06	763.5	81.2	27.3	50	SSE	12	5.4		0	1						The Staff, for E. J. Stone.
Hobart Town, (Tasmania)			30.00	762.0	68.0	20.0	94	SW			1		10n			0.02	0.5	Drizzling	Francis Abbott, F.R.A.S.
Leith, Restalrig Park			29.44	747.8	41.2	5.1		W			3		8k			0.24	6.1		Andrew Gibb.
Mauritius, Observatory			29.58	751.3	79.1	26.2		WSW	31.5	14.1						1.01	25.7		C. Meldrum.
Melbourne, Observatory			30.06	763.5	64.0	17.8	89	ESE	2	0.9			10			0.08	2.0	Sultry	R. L. J. Ellery.
Monach L't-house, (Hebrides)																			J. Youngclause.
North Unst, (Shetland Is.)			29.45	748.0	37	2.8		SE			6	5	7	SE					Robert Burnet.

Note.—Generally, the originals do not give the relative humidity, rain-fall, or distinction between upper and lower clouds. The originals give the wind direction to 32 points and weather by the Beaufort notation. The originals give the barometer for Aberdeen, Cardington, Frectown, Galway, Oxford, St. Helier, Sandwick, Scarborough, Stonyhurst, Leith, Monach and North Unst as read off and the amount of cloudiness for Stornoway by the scale 0 to 4. The wind-force is given by the scale 0 to 12 in the official series; 0 to 6 in the sub-series; except in lbs. per square foot for Greenwich and Hobart Town. The rain-fall is measured at Aberdeen at 10 a. m.; Bradford, 9 a. m.; Hobart Town, 7:30 a. m.; Nottingham, 6 p. m.; Mauritius, 9 a. m., local time. The elevation of Dartmoor is 1,400 feet, or 426.7 meters; Davos Platz, 5,105? feet, or 1,556.0? meters; Fort Napier, 2,200 feet, or 670.6 meters. *Detached clouds.

By authority of the Minister of Foreign Affairs.

COSTA RICA SERIES.

Furnished by the coöperation of Señor Federico Maison, Director of the Central Office of Statistics and Meteorology.

San José																			

DANISH SERIES.

Furnished by the coöperation of Captain N. Hoffmeyer, Director of the Royal Danish Meteorological Institute at Copenhagen.

Copenhagen			29.80	756.8	30.9	— 0.6	73	WNW			2		2						
Fanöe			29.84	757.9	30.0	— 1.1	96	E			4		1						
Godthaab, (Greenland)			29.81	757.1	16.7	— 8.5	82	Calm			0		10						
Stykkisholm, (Iceland)			29.47	748.5	22.6	— 5.3	93	E			2		0						
Thorshavn, (Faröe)			29.39	746.4	38.8	3.8	64	SE			6		10					Raining	
Vestervig			29.79	756.7	23.0	— 5.0	95	ESE			4		10					Foggy	

Note.—The originals give the wind-force by the scale 0 to 6; occasionally, weather by Vienna symbols; no distinction between the amount of upper and lower clouds.

FRENCH SERIES.

Furnished by the co operation of His Excellency, U. J. Le Verrier, Director of the Paris Observatory, and the respective Observers.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Alengon	.....	.....	30.08	764.0	50.0	10	97	SW	.....	.....	1	.....	10	.....	.....	0.04	1.	Covered	Normal School.
Amiens	.....	.....	29.94	760.4	50.7	10.4	90	SE	.....	.....	3	.....	10	.....	.....	0.039	1.0	Covered	Normal School.
Avignon	.....	.....	30.23	767.9	63.0	17.2	46	N	.....	.....	2	.....	10	.....	.....	0	0	Covered	Normal School.
Bar-sur-Seine	.....	.....	30.07	763.6	50.4	10.2	86	WSW	.....	.....	2	.....	10	.....	SW	0.067	1.7	Covered	C. Saillard.
Beaumette, (near Angers)	.....	.....	30.08	763.9	52.3	11.3	97	SW	19.7	8.8	.....	.....	10	.....	SW	0.165	4.2	Raining	Beaumette Observ'tory.
Beauvais	.....	.....	29.97	761.1	50.4	10.2	81	SW	.....	.....	3	.....	10	.....	WSW	0.010	0.25	Covered	Normal School.
Besançon	.....	.....	30.17	766.3	50.5	10.3	86	SW	.....	.....	6	.....	8	.....	SW	0.110	2.8	Very cloudy	Normal School.
Bourg en Bresse	.....	.....	30.29	769.4	53.1	11.7	76	S	.....	.....	4	.....	10kn	.....	SE	0.20	5.	Covered	Normal School.
Bourges	.....	.....	30.17	766.4	53.6	12	90	SW	.....	.....	6	.....	10	.....	WSW	0.094	2.4	Covered	Normal School.
Brest	.....	.....	29.93	760.3	53.8	12.1	93	WSW	.....	.....	5	.....	10	.....	W	0.059	1.50	Rain & fog	Naval Observatory.
Carcassonne	.....	.....	30.35	770.9	52.7	11.5	70	W	.....	.....	2	.....	5	.....	E	0	0	Cloudy	Normal School.
Caen	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Chartres	.....	.....	29.95	760.7	50.2	10.1	89	SW	.....	.....	4	.....	10	.....	NE	0	0	Covered	Normal School.
Châlons-sur-Marne	.....	.....	30.01	762.3	50.2	10.1	79	W	.....	.....	4	.....	10n	.....	E	0.048	1.1	Covered	Normal School.
Clermont	.....	.....	30.19	766.9	54.9	12.7	63	WSW	.....	.....	3	.....	8	.....	W	0	0	.....	Puy de Dome Obs'y.
Commercy	.....	.....	30.14	765.5	46.9	9.4	75	W	.....	.....	6	.....	8kn	.....	W	0.110	2.8	Very cloudy	Normal School.
Commune de Gréasque*	.....	.....	30.20	767.1	59.5	15.3	36	NW	.....	.....	6	.....	2	.....	NW	0	0	.....	M. Kina.
Grenoble	.....	.....	30.26	768.5	51.4	10.8	79	WNW	.....	.....	1	.....	8kn	.....	.....	0	0	Very cloudy	Normal School.
La Roche-sur-Yon	.....	.....	30.19	766.7	52.9	11.6	95	S	.....	.....	2	.....	2	.....	E	0.165	4.2	Slightly cl'dy	Normal School.
Le Mans	.....	.....	30.07	763.6	50.5	10.3	95	WNW	.....	.....	4	.....	10	.....	.....	0.126	3.2	Covered	Normal School.
Lons-Le-Saulnier	.....	.....	30.10	766.7	53.1	11.7	78	SE	.....	.....	2	.....	5	.....	.....	0.902	22.90	Raining	Normal School.
Lorient	.....	.....	30.04	763.0	55.0	12.8	80	SW	.....	.....	8	.....	10	.....	.....	0.413	10.5	Covered	Naval Observatory.
Mâcon	.....	.....	30.27	768.8	50.2	10.1	95	Calm	.....	.....	0	.....	10	.....	.....	0.087	2.2	Covered	Normal School.
Metz	.....	.....	30.04	763.1	46.4	8.0	90	SW	.....	.....	2	.....	10	.....	.....	0.059	1.5	Covered	M. Schuster.
Mirecourt	.....	.....	30.08	764.0	50.0	10	82	SSW	.....	.....	6	.....	10	.....	NNE	0	0	Covered	Normal School.
Nismes	.....	.....	30.11	764.7	63.3	17.4	63	SW	.....	.....	2	..e	.....	W	.....	0	0	.....	Normal School.
Orleans	.....	.....	30.08	763.9	51.8	11	86	NW	.....	.....	2	.....	10	.....	NE	0.04	1.	Covered	Normal School.
Paris, Observatory	.....	.....	29.99	761.8	51.4	10.8	93	SW	.....	.....	3	.....	10kn	.....	W	0.010	0.26	Light rain	National Observatory.
Parthenay	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Privas	.....	.....	30.20	768.5	55.8	13.2	60	SE	.....	.....	2	.....	5	.....	NW	0	0	Cloudy	Normal School.
Rochefort, Observatory	.....	.....	30.24	768.2	56.8	13.8	79	SW	.....	.....	5	.....	8	.....	NE	0	0	¾ covered	Naval Observatory.
Rouen	.....	.....	29.97	761.1	50.4	10.2	72	SW	.....	.....	2	.....	10	.....	NW	0.004	0.1	Covered	Normal School.
Saint Lo	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Tarbes	29.80	744.2	30.39	771.9	57.2	14	80	W	.....	.....	4	.....	5	.....	E	0	0	Cloudy	Normal School.
Villefranche	.....	.....	30.25	768.4	53.8	12.1	80	SE	.....	.....	3	.....	10	.....	SW	0.055	1.4	Covered	Normal School.
SUB-SERIES.																			
Fort de France, Martinique	.....	.....	29.85	758.3	77.7	25.4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	L'Abbé Marchési.
Marseilles	.....	.....	30.17	766.2	61.3	16.3	61	NW	.....	.....	3	.....	4	.....	.....	0	0	Cloudy	Marseilles Observatory.
Mont-Louis	25.08	636.9	30.39	771.9	48.4	9.1	48	SW	9.3	4.17	.....	.....	2	.....	NNE	0	0	.....	—. Falguère.
Montsouris, Paris	.....	.....	29.98	761.6	50.7	10.4	83	WSW	.....	.....	3	.....	10	.....	WSW	0	0	.....	Montsouris Observatory
Perpignan	.....	.....	30.13	765.3	61.0	16.1	61	N	18.6	8.33	.....	.....	1	.....	NW	0	0	.....	Dr. Fines.
Pic du Midi, (Summit,) H. P.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. Rayiac.
Pic du Midi, (Plantade,) H. P.	22.70	576.5	.....	.....	34.7	1.5	.....	W	.....	.....	3–4	.....	1	.....	.....	0	0	Clear	General de Nansouty.
Saint Maur, (near Paris)	.....	.....	30.00	761.9	51.3	10.7	85	SW	.....	.....	2	...	10	.....	.....	0.016	0.4	Rainy	E. Renou.
Toulouse	.....	.....	30.38	771.6	56.3	13.5	71	W	.....	.....	2	.....	7	.....	.....	.....	.....	.....	Toulouse Observatory.
Tours	.....	.....	30.11	764.9	53.6	12.0	80	W	.....	.....	2	.....	10	.....	W	0.071	1.8	.....	C. Marquet.
Versailles, (near Paris)	.....	.....	29.99	761.7	50.0	10.0	92	W	.....	.....	1	.....	10	.....	.....	0.010	0.26	Covered	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai)	.....	.....	30.46	773.3	28.0	— 2.2	63	N	1.8	0.80	.....	.....	8	.....	.....	0	0	.....	Mare Dechevrens, S. J.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—Generally, the originals give the wind-force by the scale 0 to 7; no distinction between upper and lower clouds, and, in the official series, the amount by the scale 0 to 4 the rain-fall as measured at 7, 8 or 9 a. m., local time; at Clermont, 9 a. m. of the following day; the weather in general terms as published. The elevation of Clermont is 388 meters, or 1,272.9 feet; Commune de Gréasque, 322 meters, or 1,056.4 feet; Tarbes, 308 meters, or 1,010 feet; Mont-Louis, 1,586.40 meters, or 5,204.8 feet; Pic du Midi, (Summit,) 2,877 meters, or 9,439.1 feet; Pic du Midi, (Plantade,) 2,366 meters, or 7,762.6 feet. In correcting the Mont-Louis barometric observations for altitude, the constant 135. millimeters has been added. *Bouches-du-Rhône

GERMAN SERIES.

Furnished by the cooperation of Professor Dr. G. Neumayer, Director of the German Naval Observatory, Hamburg.

Bamberg	.....	.....	29.88	758.9	43.3	6 3	90	W	.....	.....	8	.....	10	W	.....	0.236	6.0	Raining	Prof. T. Hoh
Berlin	.....	.....	29.90	759.4	36.5	2.5	58	N	.....	.....	3	.....	8	.....	.....	0.445	11.3	.....	Prof. Arndt.
Breslau	.....	.....	29.77	756.2	32.9	0.5	69	NW	.....	.....	9	.....	7	N	.....	0.157	4.0	.....	Royal University Obs'y
Carlsruhe	.....	.....	29.95	760.6	50.4	10.2	82	SW	.....	.....	5	.....	10	.....	.....	0.177	4.5	.....	A. Senz.
Cassel	.....	.....	29.90	759.4	35.6	2.0	91	NNW	.....	.....	4	.....	10	W	.....	0.567	14.4	Rain & snow	Dr. H. Möhl.
Crefeld	.....	.....	29.82	757.3	47.8	8.8	93	SW	.....	.....	3	.....	10	.....	.....	0.63	16.	Raining	Director Lose.
Emden	.....	.....	29.89	759.3	35.8	2.1	91	SE	.....	.....	1	.....	10	.....	.....	1.075	27.3	.....	Prof. Prestel.
Frankfort on the Main	.....	.....	29.95	760.8	49.6	9.8	70	WSW	.....	.....	3	.....	10	.....	.....	0.098	2.5	.....	Physical Society.
Friedrichshafen	28.04	727.5	30.09	764.3	50.0	10.0	69	WSW	.....	.....	7	.....	10	.....	.....	1.075	27.3	Lt. Rain & fohn.	M. Wilhelm.
Hamburg	.....	.....	29.87	758.7	35.6	2.0	71	SE	.....	.....	2	.....	9kn	.....	.....	0.409	10.4	Cloudy	Captain F. Hegemann.
Kiel	.....	.....	29.84	758.0	35.8	2.1	84	NW	.....	.....	2	.....	6	.....	.....	0.350	8.9	.....	Prof. G. Karsten.
Königsberg, (Prussia)	.....	.....	29.56	750.8	25.2	— 3.8	86	N	.....	.....	5	.....	9	.....	.....	0.146	3.7	Snowing	Prof. E. Luther.
Köslin	.....	.....	29.80	757.0	30.4	— 0.9	.....	NW	.....	.....	1	.....	7	.....	.....	0.252	6.4	.....	H. Müller.
Leipsic	.....	.....	29.94	760.4	32.5	0.3	100	NW	.....	.....	2	.....	10	.....	.....	0.051	1.3	Snowing	Prof. Bruhns.
Memel	.....	.....	29.56	750.8	24.4	— 4.2	77	NNE	.....	.....	4	.....	10ks	.....	.....	0.031	0.8	.....	Reinbrecht & Skalweit
Münster	.....	.....	29.86	758.5	37.2	2.9	93	SW	.....	.....	6	.....	10	.....	.....	0.177	4.5	.....	Prof. E. Heis.
Neufahrwasser	.....	.....	29.61	752.1	30.6	— 0.8	73	NNE	.....	.....	5	.....	8	.....	.....	0.067	1.7	.....	A Lothe.
Posen	.....	.....	29.74	755.3	33.8	1.0	63	NW	.....	.....	10	.....	8	.....	.....	0	0	.....	Dr. Magener.
Strassburg, (in Alsace)	.....	.....	30.02	762.5	50.5	10.3	84	SW	.....	.....	2	.....	10	SW	.....	0.024	0.6	Raining	Dr. Schur.
Stuttgart	.....	.....	29.94	760.4	49.6	9.8	76	W	.....	.....	2	.....	8	.....	.....	0.177	4.5	Raining	Prof. Schoder.
Thorn	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Dr. Hasenbalg.
Treves, (Trier)	.....	.....	29.87	758.8	49.6	9.8	75	SSW	.....	.....	6	.....	10	.....	.....	0.059	1.5	Foggy	Prof. Flesch.
Weissenburg, (Bavaria)	28.42	721.8	29.95	760.7	45.0	7.2	75	W	.....	.....	5	.....	10	.....	.....	0.071	1.8	.....	Dr. von Bebber.
Wustrow, Naval School	.....	.....	29.91	759.8	31.8	— 0.1	80	NE	.....	.....	2	.....	4	.....	.....	0	0	.....	E. F. Schütz.
GERMAN NAVAL SERIES.																			

NOTE.—The elevation of Friedrichshafen is 413.4 meters, or 1,356.3 feet; Weissenburg, 431 meters, or 1,411.4 ft. In the originals the distinction between the amount of upper and lower clouds is not made. It is not always certain that the remarks in the weather column refer to the moment of observation.

GREEK SERIES.

Furnished by the coöperation of Professor Dr. J. F. Julius Schmidt, Director of the Royal Observatory at Athens.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Athens	.....	.....	30.06	763.4	59 5	15 3	.....	SW	.....	.....	.....	.....	.....	.....	.....	.....	.....	Very clear...	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

Note.—The originals give the barometer corrected, but not reduced to sea-level; occasionally the kind of clouds; the weather as published. They omit the humidity, wind-force, amount of cloudiness and rain-fall.

INDIAN SERIES.

Furnished by the coöperation of H. F. Blanford, Meteorological Reporter to the Government of India.

Kurrachee	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Deesa	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Bombay	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Poona	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Lahore	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Belgaum	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Bangalore	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Rorkee	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Agra	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Trichinopoly	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Nagpur	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Madras	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Lucknow	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Allahabad	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Patna	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Hazaribagh	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Cuttack	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Calcutta (Alipore)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Goalpara	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Chittagong	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Sibsagar	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Rangoon	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Jubbulpore	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
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ITALIAN SERIES.

Furnished by the cooperation of His Excellency the Minister of Agriculture, Industry and Commerce, and the respective Observers.

Udine	.....	.....	30.01	762.2	47.7	8.7	67	Calm	0	0	.....	.....	10	.....	.....	0	0	.....	Prof. Giovanni Clodig.
Stelvio	22 09	561.1	.....	.....	27.0	— 2.8	.....	W	.....	.....	1	.....	1	NE	.....	0	0	.....	Signora Ernesta Manfredi.
Valdobbia	22.17	563.1	.....	.....	28.8	— 1.8	54	WSW	.....	.....	4	.....	5	NW	.....	0	0	.....	Ab. Dom. Mongini.
Padua	.....	.....	30.00	761.9	45.7	7.6	84	NNW	2.5	1.1	.....	.....	10	SW	.....	0	0	.....	Prof. Dott. Lorenzoni.
Vicenza	.....	.....	29.98	761.4	49.8	9.9	64	E	3.1	1.4	.....	.....	5	W	.....	0	0	.....	Conte Alm. Da Schio.
Verona	.....	.....	30.01	762.3	45.9	7.7	87	E	.....	.....	6	.....	10	.....	.....	0	0	.....	Dott. B. Bertoncelli.
Bergamo	28.63	727.1	29.97	761.3	52.2	11.2	57	SW	.....	.....	4	.....	2	.....	.....	0	0	.....	Prof Trionfini Carlo.
Domodossola	.....	.....	30.00	762.0	50.7	10.4	57	S	.....	.....	4	.....	3	.....	.....	0	0	.....	Prof. Giuseppe Ulrich.
Milan	.....	.....	30.02	762.4	54.3	12.4	85	NW	.....	.....	4	.....	3	.....	.....	0	0	.....	Ab. Gio. Capelli
Pavia	.....	.....	30.02	762.4	50.7	10.4	81	NW	.....	.....	2	.....	3	.....	.....	0	0	.....	Prof. Gio. Cantoni.
Moncalieri	.....	.....	30.02	762.4	48.0	8.9	77	ESE	1.8	0.8	.....	.....	5	N	.....	0	0	.....	Prof. P. F. Denza.
Mondovi	28.09	713.4	30.03	762.8	54.3	12.4	44	NW	.....	.....	2	.....	3	NNW	.....	0	0	.....	Prof. L. C. Bruno.
Porto Maurizio	.....	.....	30.13	765.3	56.5	13.6	71	SE	.....	.....	2	.....	5	.....	.....	0	0	.....	Prof. ... Vassallo.
Genoa	.....	.....	30.10	764.5	55.2	12.9	70	SE	5.6	2.5	.....	.....	10	S	.....	0	0	.....	Prof. G. M. Garibaldi.
Piacenza	.....	.....	30.05	763.2	42.1	5.6	92	SW	3.8	1.7	.....	.....	10	.....	.....	0	0	Foggy	Dott. G. Manzi.
Parma	.....	.....	30.07	763.7	45.5	7.5	93	S	.....	.....	2	.....	10	.....	.....	0	0	Foggy	Prof. P. Pigorini.
Florence	.....	.....	30.13	765.3	56.3	13.5	65	SW	.....	.....	2	.....	10	SW	.....	0	0	.....	Cav. F. Meucci.
Leghorn	.....	.....	30.12	765.0	57.9	14.4	67	SW	3.8	1.7	.....	.....	4	W	.....	0	0	.....	Prof. P. Monte.
Siena	28.89	733.8	30.11	764.9	53.1	11.7	62	SW	0	0	.....	.....	10	SW	.....	0	0	.....	Prof. L. Toscani.
Urbino	28.58	725.9	30.17	766.3	51.6	10.9	63	SW	.....	.....	2	.....	3	.....	.....	0	0	.....	Prof. P. Serpieri.
Pesaro	.....	.....	30.03	762.7	56.1	13.4	64	SW	23.0	10.3	.....	.....	10	W	.....	0	0	Foggy	Prof. Luigi Guidi.
Ancona	.....	.....	30.03	762.8	58.5	13.6	73	SSE	.....	.....	4	.....	2	.....	.....	0	0	.....	Prof. F. De— Bosis.
Grosseto	.....	.....	30.13	765.3	58.6	14.8	62	S	.....	.....	2	.....	6	.....	.....	0	0	.....	Avv. P. Ponticelli.
Rome	.....	.....	30.14	765.6	58.1	14.5	66	SW	3.8	1.7	.....	.....	8	SW	.....	0	0	.....	Prof's. P. Secchi & L. Respighi
Naples, O. U	.....	.....	30.16	766.0	60.1	15.6	57	SSW	.....	.....	2	.....	8	NW	.....	0	0	.....	Prof. L. Palmieri.
Lecce	.....	.....	30.11	764.8	57.9	14.4	53	WNW	7.4	3.3	.....	.....	4	NW	.....	0	0	.....	Prof. C. De—Giorgi.
Cosenza	.....	.....	30.16	766.0	58.3	14.6	64	NW	3.1	1.4	.....	.....	6	.....	.....	0	0	.....	Prof. F. D. Conti.
Cagliari	.....	.....	30.17	766.4	59.0	15.0	58	NW	.....	.....	4	.....	3	NW	.....	0	0	.....	Prof. A. Pacinotti.
Ittiposto, (Sicily)	.....	.....	30.11	764.8	59.0	15.0	61	SE	.....	.....	2	.....	8	S	.....	0	0	.....	Prof. F. Cafiero.
Palermo	.....	.....	30.04	763.1	56.8	13.8	69	WNW	4.9	2.2	.....	.....	10	.....	.....	0	0	.....	Prof. G. Cacciatore.
Caltanissetta	28.17	715.5	30.15	765.9	49.5	9.7	76	W	.....	.....	2	.....	10	S	.....	0	0	.....	Prof. A. Pagani.
Siracusa	.....	.....	30.19	766.7	60.4	15.8	55	WNW	.....	.....	2	.....	6	WSW	.....	0	0	.....	Prof. V. Giuliano.
Sub-Series.																			
Naples, S. R.	.....	.....	30.19	766.8	59.5	15.3	53	NE	7.4	3.3	.....	.....	7	NW	.....	0	0	.....	Prof. F. Brioschi
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

Note.—The originals give the wind-force by the scale 0 to 4, or the velocity in kilometers per hour; generally, no distinction between upper and lower clouds, occasionally the weather by the Vienna symbols. The elevation of Stelvio is 2,543.0 meters, or 8,342.9 feet; Valdobbia, 2,548.0 meters or 8,359.3 feet; Bergamo, 379.6 meters, or 1,24. 3 feet; Mondovi, 556 meters, or 1,824.2 feet; Siena, 348.5 meters, or 1,143.3 feet; Urbino, 451 meters, or 1,479.7 feet. Caltanissetta, 570.3 meters, or 1,871.0 feet.

JAPANESE SERIES.

Furnished by the coöperation of the Imperial University of Tokei, Japan.

Tokei	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Prof. P. V. Veeder.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

Note.—The originals give the amount of cloudiness by the scale 0 to 4 without distinguishing between upper and lower clouds. The rain-fall is measured at 7 a. m., cal time.

By authority of the SECRETARY OF PUBLIC WORKS.

MEXICAN SERIES.

Furnished by the coöperation of Senor Mariano Barcena, Director of the Central Meteorological Observatory in the City of Mexico.

STATIONS.	BAROMETER. Corrected for instrum'tal error and temperature. Inches.	BAROMETER. Corrected for instrum'tal error and temperature. Millimeters.	BAROMETER. Reduced to sea-level. Inches.	BAROMETER. Reduced to sea-level. Millimeters.	TEMPERATURE OF THE AIR. Fahrenheit.	TEMPERATURE OF THE AIR. Centigrade.	RELATIVE HUMIDITY. Per cent.	WIND. Direction. From—	WIND. Velocity. Miles per hour.	WIND. Velocity. Meters per second.	WIND. Force. 0—10.	CLOUDS. Amount. Up'er 0—10.	CLOUDS. Amount. Low'r 0—10.	CLOUDS. Direction. Upper. From—	CLOUDS. Direction. Lower. From—	RAIN-FALL OR MELTED SNOW IN THE PAST 24 HOURS. Inches.	RAIN-FALL OR MELTED SNOW IN THE PAST 24 HOURS. Millimeters.	WEATHER.	OBSERVER.
Mexico																			Mariano Barcena.
																			Vicente Reyes.
																			Miguel Perez. (Engineers in charge.)

NOTE.—The elevation of Mexico is 2,290 meters, or 7,512.9 feet. The rain-fall is measured at 6 a. m., local time.

NETHERLANDS' SERIES.

Furnished by the cooperation of Professor Buys Ballot, Director of the Royal Meteorological Institute of the Netherlands at Utrecht.

Flushing			29.80	756.9	48.2	9.0		WSW			5					0.059	1.5		
Groningen			29.77	756.1	37.6	3.1										0.091	2.3		
Helder			29.72	755.0	40.3	4.6		ESE			4					0.449	11.4		
Utrecht			29.74	755.4	46.8	8.2	94	WSW			3		10			0.429	10.9	Overcast	

NOTE.—The originals give the wind-pressure in kilograms per square meter; for Utrecht, they give the weather as published, from which the amount of cloudiness is taken by the scale 0 to 4, without distinguishing between upper and lower clouds. It is assumed that the barometer readings have been reduced to sea-level.

NORWEGIAN SERIES.

Furnished by the coöperation of Professor H. Mohn, Director of the Royal Norwegian Meteorological Institute at Christiania.

Bergen			29.73	755.2	25.5	— 3.6	82	S	1.8	0.8		0				0	0		
Brönö			29.63	752.7	28.8	— 1.8	92	N	8.9	4		8						Snowing	
Christiania			29.81	757.1	14.9	— 9.5	84	Calm	0	0		2				0	0	Light fog	
Tromsö			29.60	749.3	20.8	— 6.2	79	SW	17.9	8		5				0.020	0.5		

NOTE.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols. The cloudiness and weather at Bergen refer to 2h., p. m., local time, instead of 1h., 4 min.

PORTUGUESE SERIES.

Furnished by the cooperation of J. C. de Brito Capello, Director of the Meteorological Observatory of the Infante Don Luiz at Lisbon.

Angra, (Azores)			30.26	768.6	61.7	16.5	85	SSW	15.0	6.7		4	NNE			0	0		Dr. J. A. Sampaio.
Campo Major			30.49	774.5	44.8	7.1	91	E	1.8	0.8		10	E			0	0		Dr. A. M. R. dos Santos.
Funchal, (Madeira)			30.47	774.0	61.5	16 4	56	ESE	8.1	3.6		2				0	0		Capt. D. A. de Cunha.
Lisbon			30.51	774.9	55 9	13.3	81	NNE	6.3	2.8		3	NE			0	0		The Observatory.
Ponta Delgada, (Azores)			30.37	771.5	63.7	17.6	76	S	8.7	3.9		6				0	0		

NOTE.—The originals give the wind-velocity in kilometers per hour; occasionally, the weather by the Vienna symbols; the amount of cloudiness without distinguishing between upper and lower clouds; the barometer corrected but not reduced to sea-level. The rain-fall at Libson is measured at noon, instead of 0 h. 6 m., p. m.

RUSSIAN SERIES.

Furnished by the cooperation of Professor H. Wild, Director of the Imperial Central Physical Observatory of Russia, at St. Petersburg.

Warsaw			29.06	738.2	31.5	— 0.3	98	NW	36	16		10						Snowing	Astronomical Obs.
Wilna			29.36	745.8	25.5	— 3.6	85	NNE	2	1		10						Snowing	Astronomical Obs.
Dorpat			29.67	753.7	7.5	—13.6	85	NE	7	3		2							Physical Cabinet.
St. Petersburg			29.75	755.6	— 0 4	—18.0	80	ENE	9	4		5						Light fog	Central Physical Obs
Kuopio			29.75	755.7	7.3	—13.7	100	ESE	7	3		0							Ch. Forsten.
Kieff			29.40	746.7	29.8	— 1.2	90	S	16	7		10							Physical Cabinet.
Nikolaiev			29.74	755.4	34.9	1.6	87	SSW	29	13		10							Kurdakof
Kertch			29.96	760.9	35.4	1.9	75	SW	7	3		10							Lagorio.
Moscow			29.84	757.9	4.1	—15.5	76	S	4	2		5							Meteorological Obs.
Lugan			29.76	755.8	20.8	— 6.2	76	SW	9	4		10				Blank	Blank		Meteorological Obs.
Archangel			29.99	761.8	—18.0	—27.8	82	ESE	9	4		0							Ogorodnikof.
Tiflis	28.05	727.6	30.11	764.7	41.0	5.0	83	N	22	10		9							Physical Observatory.
Astrakhan			29.66	753.4	32.7	0.4	92	WSW	16	7		10				Blank	Blank		Sebastianof.
Kasan			29.88	759.0	7.0	—13.9	87	S	13	6		10							Physical Cabinet.
Orenburg			30.28	769.0	0.1	—17.7	73	E	13	6		5							Tschernischef.
Ekaterinburg	29.22	742.3	30.32	770.1	—14.6	—25.9	73	E	2	1		10							Meteorogical Obs.
Nukuss			30.98	761.4	34.5	1.4	87	SSW	2	1		10							
Kasaly																			Bobrof.
Tashkend	28.57	725.6	30.34	770.6	41.7	5.4	70					9							Michelson.
Barnaul			30.23	767.9	19.9	— 6.7	63	N	4	2		10						Snowing	Meteorological Obs.
Yeniseisk			30.28	769.1	1.8	—16.8	75	SE	4	2		10							Marks.
Irkutsk																			Usolzef.
Peking, (China)			30.41	772.4	14.4	— 9.8	30	NNE	11	5		0							Physical Observatory.
Nertchinsk																			Meteorological Obs.
Vladivostock																			
Nikolaievsk, on the Amoor																			

NOTE.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols; they omit the rain-fall. The elevation of Tiflis is 409 meters, or 1,341.8 feet; Ekaterinburg, 306.4? m., or 1,005.2? ft.; Tashkend, 494.2? m., or 1,621.3? ft.; Irkutsk, 392 m., or 1,286 ft.; Nertchinsk, 592.0? m., or 1,942.2? ft.

SPANISH SERIES.

Furnished by the coöperation of Antonio Aguilar, Director of the Royal Observatory at Madrid, and of Don Cecilio Pujazon, Captain R. N. Director of the Naval Observatory at San Fernando.

Madrid			30.47	773.9	51.4	10.8	62	S	4.5	2.00		0	0			0	0	Clear	Royal Observatory.
San Fernando			30.48	774.1	57.0	13.9	76	NW	6.5	2.9		0	2		NW				Naval Observatory.

NOTE.—The originals give the weather in general terms, as published; rain-fall for San Fernando from preceding to following midnight; wind-velocity for Madrid in kilometers per hour.

SWEDISH SERIES.

Furnished by the cooperation of Professor R. Rubenson, Director of the Royal Swedish Meteorological Institute, at Stockholm, and of Dr. H. H. Hildebrandsson, Chief of the Meteorological Division of the Upsala Observatory.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	OBSERVER.
Haparanda			29.83	757.7	—10.5	—23.6	82	N			2		0			0	0		
Umea			29.75	755.7	— 1.1	—18.4	89	NE			2		1			0	0		
Hernosand			29.74	755.3	6.1	—14.4	92	NE			2		3			0.051	1.3		
Stockholm			29.70	754.4	18.3	— 7.6	95	Calm			0		10			0	0		
Wisby			29.74	755.5	24.8	— 4.0	87	NNE			6		7			0	0		
Sub-Series.																			
Upsala			29.71	754.6	19.8	— 6.8	85	SW	5.8	2.6			6	N		0.066	1.69		Dr. Hildebrandsson.

Note.—The originals give the wind-force by the scale 0 to 6, and Upsala also velocity in meters per second; occasionally, the weather by the Vienna symbols, or in general terms; no distinction between the amount of upper and lower clouds. The rain-fall is measured at 8 a. m., local time.

SWISS SERIES.

Furnished by the cooperation of Professor R. Wolf, Director of the Observatory at Zurich, and of Professor E. Plantamour, Director of the Observatory at Geneva.

Geneva	28.77	730.7	30.20	767.0	53.1	11.7	60	S			6		9			0.012	0.3	Raining	The Observatory.
Zurich	28.45	722.7	30.10	764.5	51.4	10.8	67	W			2		9		W	1.260	32.0	Cloudy	The Observatory.

Note.—For Geneva the corresponding departures from the normal values are: Barometer, +4.3 mm; Thermometer, +8.3 cent.; Relative Humidity, —12 per cent.

Note.—The rain-fall is measured at Zurich at 7 a. m. on the following day. The originals give the barometer corrected but not reduced to sea-level; the wind-force by the scale 0 to 4 for Zurich; the amount of cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The elevation of Geneva is 408 meters, or 1,339 feet, and that of Zurich 470 meters, or 1,542 feet.

TURKISH SERIES.

Furnished by the cooperation of A. Coumbary, Effendi, Director of the Central Observatory at Constantinople, and of Professor C. V. A. Van Dyck, Superintendent of the Lee Observatory at Beirut.

Constantinople																			
Fao, (Persian Gulf)																			
Salonica																			
Valona																			
Varna																			
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y			30.20	767.1	59.0	15.0	88	SW			1		10n		SW	0.19	4.8	Overcast	Prof. C. V. A. Van Dyck.

Note.—The originals give the wind-force by the scale 0 to 7, (except Beirut, by the scale 0 to 12, and Constantinople velocity in meters per second;) the weather in general terms as published; no distinction between upper and lower clouds, and, except Constantinople and Beirut, the amount by the scale 0 to 4. It is assumed that the barometer is reduced to sea-level.

CANADIAN SERIES.

Furnished by the cooperation of Professor G. T. Kingston, Director of the Magnetic Observatory at Toronto, and Superintendent of the Meteorological Office of the Dominion of Canada, and the respective Observers. Those marked with a star (*) are also telegraphed daily to the office of the Chief Signal Officer, U. S. Army.

Bathurst, N. B			29.98	761.5	16.6	— 8.6	88	SW	6.2	2.8									Hon. J. Ferguson.
Brockville, Ontario			29.87	758.7	39	3.9		SW	7	3.1			10s		SW	Inap.	Inap.	Light rain	W. R. Bigg.
*Chatham, N. B			30.04	763.0	13	—10.6	90	NE	1	0.4			10ks			0	0	Cloudy	G. A. Blair.
Charlottetown, P. E. Island			30.19	766.8	12	—11.1	92	SE	5	2.2			8s			0	0	Cloudy	H. J. Cundall, C. E.
Cornwall, Ontario			29.84	757.9	39.9	4.4	76	W			1		10s			0.087	2.21	Threatening	James Smith, M. A.
Dalhousie, N. B			29.98	761.5	14.8	— 9.6	100	E			2							Snowing	H. A. Johnson.
Esquimault, B. C			29.81	757.2	39.1	3.9	91	SW					10n			0.60	15.2	Rainy	W. H. Bevis.
*Father Point, Quebec			29.86	758.4	26	— 3.3	86	Calm	0	0			10n			0.01	0.3	Threatening	J. McWilliams.
Fredericton, N. B			30.08	764.0	16.9	— 8.4	93	Calm	0	0			Haze			Inap.	Inap.	Cloudy	Prof. Harrison.
*Fort Garry, Manitoba			30.82	782.8	—20	—28.9	100	S	2	0.9		0	2s		S	0	0	Fair	James Stewart.
Goderich, Ontario			30.10	764.5	26.1	— 3.3	87	NW			4	3c	5n			0.25	6.3	Threatening	H. J. Strang, M. A.
Granton, Ontario	28.99	736.3	30.16	766.1	27.2	— 2.7		NW			3		10n			0.24	6.1	Cloudy	James Grant.
*Halifax, N. S			30.18	766.6	18	— 7.8	95	Calm	0	0			Fog			0.045	1.14	Foggy	F. Allison, M. A.
Hamilton, Ontario			30.14	765.5	34.2	1.2	72	W			4	10cs	0	SW		Inap.	Inap.	Cloudy	G. Dickson.
Heart's Content, N. F			29.04?	737.6?	13	—10.6	100	NE			1	0	0			0	0	Fine	E. Weedon.
*Kingston, Ontario			29.93	760.2	36	2.2	90	SW	6	2.7			10		SW	0.05	1.3	Light rain	S. Woods, M. A
*Montreal, Quebec			29.82	757 4	33	0.6	90	SW	20	8.9		0	8ks		W	0	0	Cloudy	C. H. McLeod, C. E.
*Ottawa, Ontario			29.85	758.2	37	2.8	83	S	10	4.5			10n		S	0.03	0.8	Light rain	J. B. Hunoy.
*Parry Sound, Ontario			30.01	762.2	26	— 3.3	88	W	22	9.8		5k	5ks	W	W	0.01	0.3	Cloudy	Rev. R. Mosley.
Port Dover, Ontario			30.06	763.5	35	1.7	90	NW	16	7.2		10k	0	NW		0.03	0.8	Cloudy	H. Morgan.
Port Hastings, N. S			30.25	768.3	21	— 6.1		Calm	0	0						0	0	Fine	Peter Grant
Port Stanley, Ontario			30.12	765.0	33	0.6	88	W	14	6.3			10n		NW	0.01	0.3	Light snow	M. Payne.
*Quebec, Quebec			29.80	758.4	27	— 2.8	88	NE	1	0.4			10n		N	0.05	1.3	Heavy snow	Capt. Ashe, R. N.
*Rockliffe, Ontario			29.85	758.2	33	0.6	84	NW	18	8.0			8s		NW	0	0	Cloudy	
St. John, N. B			30.10	764.5	30	— 1.1	89	SE	13	5.8		10ks?	0			0	0	Threatening	G. Murdoch, C. E.
*Saugeen, Ontario			30.11	764.8	23	— 5.0	80	NW	23	10.3			10n		W	0	0	Cloudy	K. Stewart.
Stayner, Ontario			30.06	763.5	25	— 3.9	76	NW	24	10.7			10n		NW	Inap.	Inap.	Cloudy	R. J. Cole.
Stratford, Ontario	28.75	730.2	30.10	764.5	28.6	— 2.2	93	NW	15	6.7			10s			0.11?	2.92	Cloudy	C. J. MacGregor, M. A.
*Sydney, C. B			30.25	768.3	1	—17.1	94	SW	1	0.4		8k	0	NW		0	0	Fair	T. C. Hill.
*Toronto, Ontario			30.01	762.2	34	1.1	70	NW	20	8.9		2c	5ks	W	NW	0	0	Cloudy	Magnetic Observatory.
Woodstock, Ontario			30.07	763.8	30.7	— 0.7	98	W	21	9.4			10s			0	0	Cloudy	J. Montgomery.
Sub-Series.																			
St. Johns, Newfoundland			30.06	763.5	15.0	— 9.4		Calm					5s			0	0	Fair	John Delany

Note.—The originals for Brockville, Charlottetown, Port Dover, Port Stanley, Stayner, St. Johns, N. F. and those telegraphed, give the amount of cloudiness by the scale 0 to 4. The elevation of Granton is 1,015 feet, or 309.4 m.; Stratford, 1,182 feet, or 360.3 m

UNITED STATES SERIES.

Furnished by the coöperation of Bvt. Brig. Gen. Albert J. Myer, Chief Signal Officer, U. S. Army.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount Upp'r 0—10.	Clouds. Amount Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain fall or melted snow in the past 24 hours. Inches	Rain fall or melted snow in the past 24 hours. Millimeters.	Weather	Observer.
Albany, N. Y.	.....	.....	30.03	762.7	35	1.7	79	SE	23	10.3	.....	0	5ks	.....	SE	0	0	Fair	
Alpena, Mich.	.....	.....	30.31	769.9	13	—10.6	81	NW	25	11.2	.....	.....	10n	.....	NW	0.02	0.5	Light snow..	
Atlantic City, N. J.	.....	.....	30.20	767.1	38	3.3	80	SW	8	3.6	.....	10cs	0	SW	.....	0	0	Cloudy.....	
Augusta, Ga.	.....	.....	30.36	771.1	41	5.0	91	NW	5	2.2	.....	.....	10s	.....	NW	0	0	Cloudy.....	
Baltimore, Md.	.....	.....	30.20	767.1	38	3.3	81	Calm	0	0	.....	2c	5s,smc'	.....	.....	0	0	Smoky.....	
Barnegat, N. J.	.....	.....	30.18	766.6	37	2.8	85	SW	13	5.8	.....	10cs'	Haze	W	.....	0	0	Cloudy.....	
Bismarck, Dakota	28.69	728.7	30.60	777.2	— 5	—20.6	63	SE	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Boston, Mass.	.....	.....	30.08	764.0	33.5	0.8	79	SW	17	7.6	.....	.....	10s,sm'	.....	SW	0	0	Cloudy.....	
Breckenridge, Minn.	.....	.....	30.84	783.3	—16	—26.7	70	N	8	3.6	.....	0	0	.....	.....	0	0	Clear	
Buffalo, N. Y.	.....	.....	29.97	761.2	38	3.3	100	W	20	8.9	.....	.....	10n	W	.....	0.07	1.8	Light rain...	
Burlington, Vt.	.....	.....	29.89	759.2	40	4.4	72	S	12	5.4	.....	0	8s	.....	.....	0	0	Cloudy	
Cairo, Ill.	.....	.....	30.38	771.6	46	7.8	69	N	11	4.9	.....	.....	10s	.....	NW	0	0	Cloudy.....	
Cape Hatteras, N. C.	.....	.....	30.24	768.1	45	7.2	92	NE	6	2.7	.....	5cs	0	W	.....	0	0	Fair	
Cape Henry, Va.	.....	.....	30.29	769.4	40	4.4	56	SW	10	4.5	.....	2c	5s	SW	.....	0	0	Fair	
Cape Lookout, N. C.	.....	.....	30.29	769.4	44	6.7	84	NE	4	1.8	.....	5c	5s	.....	.....	0	0	Cloudy.....	
Cape May, N. J.	.....	.....	30.20	767.1	40	4.4	80	S	16	7.2	.....	.....	10s	.....	W	0	0	Cloudy.....	
Charleston, S. C.	.....	.....	30.31	769.9	49	9.4	50	N	7	3.1	.....	2cs	Sm'e	.....	.....	Inap.	Inap.	Fair	
Cheyenne, Wyoming	24.13	612.9	30.07	763.8	16	— 8.9	100	SW	8	3.6	.....	0	5s	.....	.....	0	0	Fair	
Chicago, Ill.	.....	.....	30.44	773.2	25	— 3.9	75	NW	12	5.4	.....	0	0	.....	.....	0	0	Clear.....	
Cincinnati, Ohio	.....	.....	30.21	767.3	47	8.3	62	W	5	2.2	.....	5ck	Sm'e	W	.....	0	0	Fair	
Cleveland, Ohio	.....	.....	30.18	766.6	34.5	1.4	80	W	17	7.6	.....	.....	10s	.....	W	Inap.	Inap.	Threatening	
Corsicana, Tex.	.....	.....	30.14	765.5	48	8.9	92	E	18	8.0	.....	.....	10n	.....	.....	1.30	33.0	Light rain...	
Davenport, Iowa	.....	.....	30.61	777.5	18	— 7.8	84	N	12	5.4	.....	1cs	0	.....	.....	Inap.	Inap.	Clear.....	
Denison, Tex.	.....	.....	30.27	768.8	47	8.3	92	E	8	3.6	.....	.....	10n	.....	E	1.14	29.0	Heavy rain..	
Denver, Col.	24.97	634.2	30.19	766.8	24	— 4.4	88	Calm	0	0	.....	.....	10s	.....	.....	0	0	Cloudy.....	
Detroit, Mich.	.....	.....	30.19	766.8	33	0.6	69	W	12	5.4	.....	.....	10s	.....	NW	0	0	Cloudy.....	
Dodge City, Kan.	27.75	704.8	30.24	768.1	21	— 6.1	85	NE	16	7.2	.....	.....	10s	.....	NE	Inap.	Inap.	Cloudy.....	
Dubuque, Iowa	.....	.....	30.64	778.2	16	— 8.9	66	NW	5	2.2	.....	0	0	.....	.....	Inap.	Inap.	Clear	
Duluth, Minn.	.....	.....	30.78	781.8	5	— 5.0	75	N	14	6.3	.....	0	0	.....	.....	0	0	Clear	
Eastport, Me.	.....	.....	30.05	763.3	34	1.1	90	SW	13	5.8	.....	.....	10s	.....	SW	0	0	Cloudy.....	
Erie, Pa.	.....	.....	30.06	763.5	38	3.3	90	W	22	9.8	.....	.....	10n	.....	W	0.08	2.0	Light rain...	
Escanaba, Mich.	.....	.....	30.53	775.4	15	— 9.4	73	N	21	9.4	.....	.....	10s	.....	N	Inap.	Inap.	Cloudy.....	
Fort Gibson, Indian Ter.	.....	.....	30.31	769.9	42	5.6	91	N	8	3.6	.....	.....	10n	.....	.....	0.01	0.3	Light rain...	
Ft. St. Michael, Alaska	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Fort Sill, Indian Ter.	29.05	737.9	30.22	767.6	33	0.6	79	N	17	7.6	.....	.....	10n	.....	.....	0.08	2.0	Cloudy.....	
Fort Sully, Dakota	28.79	731.3	30.69	779.5	3	—16.1	73	SE	12	5.4	.....	0	0	.....	.....	0	0	Clear.....	
Florence, Arizona	28.68	728.5	30.22	767.6	55	12.8	.....	SE	.....	.....	.....	.....	10s	.....	SE	0	0	Cloudy.....	
Galveston, Tex.	.....	.....	30.19	766.8	58	14.4	93	E	12	5.4	.....	.....	10s	.....	.....	0.02	0.5	Threatening	
Grand Haven, Mich.	.....	.....	30.40	772.1	23	— 5.0	79	NW	26	11.6	.....	.....	10s	.....	NW	0.03	0.8	Cloudy.....	
Indianapolis, Ind.	.....	.....	30.36	771.1	33	0.6	79	NW	12	5.4	.....	.....	10s	.....	NW	0	0	Cloudy.....	
Indianola, Tex.	.....	.....	30.14	765.5	60	15.6	94	E	11	4.9	.....	.....	10n	.....	.....	0.27	6.9	Light rain...	
Jacksonville, Fla.	.....	.....	30.27	768.8	51	10.6	78	NW	2	0.9	.....	2k	0	NW	.....	0	0	Fair	
Keokuk, Iowa	.....	.....	30.57	776.5	18	— 7.8	84	N	10	4.5	.....	0	5s	.....	N	0.04	1.0	Fair	
Key West, Fla.	.....	.....	30.12	765.0	61	16.1	88	N	16	7.2	.....	0	2ks	.....	.....	0	0	Clear	
Kittyhawk, N. C.	.....	.....	30.31	769.9	34	1.1	90	Calm	0	0	.....	.....	10s	.....	.....	0	0	Cloudy.....	
Knoxville, Tenn.	.....	.....	30.34	770.6	38	3.3	80	NE	1	0.4	.....	2ck	Fog	W	.....	0	0	Fair	
La Crosse, Wis.	.....	.....	30.68	779.3	12	—11.1	61	N	14	6.3	.....	0	0	.....	.....	0	0	Clear.....	
Leavenworth, Kan.	.....	.....	30.57	776.5	20	— 6.7	85	N	12	5.4	.....	5cs	0	.....	.....	0.01	0.3	Fair	
Louisville, Ky.	.....	.....	30.30	769 6	47	8.3	62	SW	8	3.6	.....	5k	Sm'e	SW	.....	0	0	Fair	
Lynchburg, Va.	.....	.....	30.26	768.6	37	2.8	80	Calm	0	0	.....	10cs	Sm'e	W	.....	0	0	Cloudy.....	
Malone, N. Y.	.....	.....	29.79	756.7	47	8 3	78	SW	12	5.4	.....	.....	10s	.....	SW	0	0	Cloudy	
Marquette, Mich.	.....	.....	30.55	776.0	15	— 9.4	82	NW	18	8.0	.....	.....	10s	.....	NW	0	0	Cloudy.....	
Memphis, Tenn.	.....	.....	30.34	770.6	48	8.9	64	SE	2	0.9	.....	.....	10s	.....	S	0	0	Cloudy..	
Milwaukee, Wis.	.....	.....	30.52	775.2	22	— 5.6	72	N	20	8.9	.....	0	2s	.....	.....	0	0	Clear	
Mobile Ala.	.....	.....	30.28	769.1	51	10.6	72	N	3	1.3	.....	5c	5s	.....	.....	0	0	Cloudy.....	
Montgomery, Ala.	.....	.....	30.33	770.4	50	10.0	71	E	3	1.3	.....	.....	10s	.....	.....	0	0	Cloudy.....	
Morgantown, W. Va.	29.11	739.4	30.20	767.1	40	4.4	56	S	1	0.4	.....	8c	0	W	.....	0	0	Fair	
Mt. Washington, N. H.	23.59	599.2	29.95	760.7	26	— 3.3	100	NW	48	21.5	.....	.....	Fog	.....	.....	0	0	Foggy	
Nashville, Tenn.	.....	.....	30.34	770.6	40	4.4	82	Calm	0	0	.....	2cs	Fog	.....	.....	0	0	Fair	
New Haven, Conn.	.....	.....	30.14	765.5	39	3.9	63	Calm	0	0	.....	.....	10s	.....	S	0	0	Cloudy.....	
New London, Conn.	.....	.....	30.14	765.5	35	1.7	90	SW	4	1.8	.....	2ck	8s	W	W	0	0	Cloudy.....	
New Orleans, La.	.....	.....	30.25	768.3	54	12.2	70	E	4	1.8	.....	.....	10s	.....	W	0	0	Cloudy.....	
Newport, R. I.	.....	.....	30.13	765.3	36	2.2	90	SW	8	3.6	.....	0	9s	.....	SW	0	0	Cloudy.....	
New York, N. Y.	.....	.....	30.16	766.1	33	0.6	84	SW	9	4.0	.....	.....	10s	.....	SW	0	0	Cloudy.....	
Norfolk, Va.	.....	.....	30.30	769.6	38	3.3	71	S	3	1.3	.....	8c	Fog	.....	.....	0	0	Fair	
North Platte, Neb.	27.50	698.5	30.34	770.6	15	— 9.4	83	E	4	1.8	.....	.....	10s	.....	.....	0	0	Cloudy.....	
Omaha, Neb.	29.42	747.3	30.02	777.7	14	—10.0	63	N	12	5.4	.....	0	2s	.....	.....	0.03	0.8	Clear.....	
Oswego, N. Y.	.....	.....	29.93	760.2	44	6.7	63	S	8	3.6	.....	.....	10s	.....	W	0	0	Threatening	
Pembina, Dakota	.....	.....	30.74	780.8	—21	—29.4	62	S	6	2.7	.....	0	0	.....	.....	0	0	Clear	
Philadelphia, Pa.	.....	.....	30.19	766.8	35	1.7	80	W	8	3.6	.....	.....	10s	.....	W	0	0	Cloudy.....	
Pike's Peak, Col.	17.69	449.3	29.90	759.4	9	—12.8	100	N	11	4.9	.....	.....	Fog	.....	.....	0.07	1.8	Heavy snow	
Pittsburgh, Pa.	.....	.....	30.11	764.8	46	7.8	61	W	10	4.5	.....	5k	2s	W	W	0	0	Cloudy.....	
Port Huron, Mich.	.....	.....	30.14	765.5	32	0.0	89	NW	12	5.4	.....	.....	10n	.....	N	Inap.	Inap.	Light snow..	
Portland, Me.	.....	.....	30.02	762.5	31	— 0.6	79	SW	8	3.6	.....	.....	10s	.....	SW	0	0	Cloudy.....	
Portland, Oregon	.....	.....	30.13	765.3	36	2.2	90	Calm	0	0	.....	.....	10s	.....	.....	0.54	13.7	Cloudy.....	
Punta Rassa, Fla.	.....	.....	30.17	766.3	56.5	13.6	80	N	12	5.4	.....	0	0	.....	.....	0	0	Clear	
Rochester, N. Y.	.....	.....	29.92	760.0	43	6.1	75	W	21	9.4	.....	.....	10n	.....	W	Inap.	Inap.	Light rain...	
Salt Lake City, Utah.	25.79	655.0	30.12	765.0	23	— 5.0	86	W	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Sandy Hook, N. J.	.....	.....	30.13	765.3	37	2.8	71	SW	14	6.3	.....	.....	10s	.....	SW	0	0	Cloudy.....	
San Diego, Cal.	.....	.....	30.28	769.1	56	13.3	87	N	2	0.9	.....	.....	10s	.....	N	0	0	Cloudy.....	
San Francisco, Cal.	.....	.....	30.21	767.3	51	10.6	86	SE	10	4.5	.....	.....	10n	.....	SE	0.12	3.0	Light rain...	
Santa Fé, N. M.	23.30	591.8	29.84	757.9	22	— 5.6	100	Calm	0	0	.....	.....	10s	.....	.....	0.36	9.1	Cloudy.....	
Savannah, Ga.	.....	.....	30.31	769.9	48	8.9	56	N	7	3.1	.....	10cs	0	N	.....	0	0	Cloudy.....	
Shreveport, La.	.....	.....	30.32	770.1	50	10.0	93	Calm	0	0	.....	.....	10n	.....	.....	0.10	2.5	Light rain...	
Smithville, N. C.	.....	.....	30.30	769.6	43	6.1	67	N	6	2.7	.....	8ck	0	NW	.....	0	0	Cloudy.....	
Springfield, Mass.	.....	.....	30.10	764.5	34	1.1	74	S	6	2.7	.....	9c	0	SW	.....	0	0	Cloudy.....	
St. Louis, Mo.	.....	.....	30.49	774.4	32	0.0	79	NE	12	5.4	.....	.....	10s	.....	.....	0.01	0.3	Cloudy	
St. Marks, Fla.	.....	.....	30.29	769.4	48	8.9	63	N	5	2.2	.....	5cs	0	NW	.....	0	0	Fair	
St. Paul, Minn.	.....	.....	30.70	779.8	8	—13.3	78	N	7	3.1	.....	0	0	.....	.....	0	0	Clear	
St. Paul's Island, Alaska	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Thatcher's Island, Mass.	.....	.....	30.06	763.5	35	1.7	80	SW	20	8.9	.....	.....	10s	.....	SW	0	0	Cloudy.....	
Toledo, Ohio.	.....	.....	30.25	768.3	36	2.2	53	NW	14	6 3	.....	5k	0	NW	.....	0	0	Fair	
Tucson, Arizona	.....	.....	30.28	769.1	45	7.2	.....	NE	.....	.....	.....	.....	10s	.....	E	0.32	8.1	Cloudy.....	
Tybee Island, Ga.	27.63	701.8	30.29	769.4	50	10.0	64	N	12	5.4	.....	10cs	0	NW	.....	0	0	Cloudy.....	
Vicksburg, Miss.	.....	.....	30.32	770.1	54	12.2	46	Calm	0	0	.....	.....	10s,sm'	.....	E	0	0	Cloudy.....	
Virginia City, M. T.	24.22	615.2	29.70	754.4	22	— 5.6	58	SE	4	1.8	.....	1k	0	SW	.....	0	0	Clear	
Washington, D. C.	.....	.....	30.20	767.1	38	3.3	76	SW	6	2.7	.....	2ck	8s	SW	W	0	0	Smoky.....	
Wilmington, N. C.	.....	.....	30.30	769.6	40	4.4	63	NE	4	1.8	.....	8cs	Sm'e	NW	.....	0	0	Fair	

UNITED STATES SERIES.—Continued.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Upper. 0—10.	Clouds. Amount. Low'r. 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Wood's Holl, Mass.	.....	.....	30.17	766.3	36	2.2	90	SW	8	3.6	.....	.....	10s	.....	SW	0	0	Cloudy	
Yankton, Dakota	29.34	745.2	30.82	782.8	6	—14.4	64	N	1	0.4	.....	0	0	.....	.....	0	0	Clear	
Yuma, Arizona	.....	.....	30.26	768.6	50	10.0	.....	E	.....	.....	.....	0	0	.....	.....	0.03	0.8	Hazy	
Sub-Series.																			
Kingston, Jamaica, W. I.	.....	.....	30.14	765.5	70	21.1	67	N	18	8.0	.....	2c	0	.....	.....	0	0	.....	James Gall.
Navassa, W. I.	.....	.....	.....	.....	73	22.8	.....	NW	.....	.....	3	.....	.....	.....	.....	0.17	4.3	.....	Dr. G. H. Davison.
Clifton, Ja., W. I.	27.12	688.8	29.94	760.5	57	13.9	87	N	5.0	2.2	.....	0	0	.....	.....	0	0	Fine	C. Partridge.
Paramaribo, D. Guiana, S. A.	.....	.....	30.01	762.2	80	26.7	87	E	.....	.....	3	2c	5k	E	.....	0	0	Fair	C. J. Hering.
Batavia, Dutch Guiana, S. A.	30.08	763 9	.....	.....	77.4	25.2	.....	E	.....	.....	.....	.....	.....	.....	.....	0	0	Cloudy	Dr. H. Groot.
Medellin, Colombia, S. A.	25.20	640.1	.....	.....	69 5	20.8	76	Calm	.....	.....	0	0	3k8	.....	.....	(	0	Fair	Thomas Herran.
York Factory, B. A.	.....	.....	30.45	773.4	— 4.0	—20.0	82	W	8	3.6	.....	2ck	0	N.	.....	0	0	Fair	J. Fortescue, W. Wood.
Honolulu, Oahu, H. I.	.....	.....	30.12	765.0	70	21.1	95	Calm	.....	.....	0	.....	.....	.....	.....	0	0	.....	Daniel Smith.
Makawao, Maui, H. I.	.....	.....	29.98	761.5	60	15.6	76	Calm	.....	.....	0	2c	4k	S	.....	0	0	.....	F. L. Clarke.

Note.—The originals give the amount of cloudiness by the scale 0 to 4, except York Factory, Makawao, Medellin and Paramaribo. The elevation of the barometer at Bismarck is 1,677 feet, or 511.1 meters; Cheyenne, 6,057.3 ft., or 1,846.2 m.; Clifton, about 1,89[illegible] ft., or 881.5 m.; Denver, 5,135 ft., or 1,565.2 m.; Dodge City, 2486ft., or 757.6 m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Florence, 1,550 (?) ft., or 472.5 (?) m.; Makawao, 2,206 ft., or 672.1 m.; Morgantown, 1,027.9 ft., or 313.3 m.; Medellin, 4,876 ft., or 1,486.2 m.; Mt. Washington, 6,285 ft., or 1,915.6 m.; North Platte, 2,846 ft., or 867.4 m.; Omaha, 1,054.6 ft., or 321.4 m.; Pike's Peak, 14,150.7 ft., or 4,313.1 m.; Salt Lake City, 4,362.2 ft., or 1,329.6 m.; Santa Fé, 6,862.2 (?) ft., or 2,091.6 (?) m.; Tucson, 2,545 (?) ft., or 775.7 (?) m.; Virginia City, 5,480 (?) ft., or 1,670.3 (?) m.; Yankton, 1,278 ft., or 389.5 m. The following constants are added in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Denver, 5.22 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fé, 6.54 in.; Tucson, 2.59 in.; Virginia City, 5.48 in. The elevation of Batavia is about 6 feet; the barometric readings need the addition of 0.2 mm. or 0.01 in. for reduction to sea-level.

UNITED STATES NAVAL SERIES.

By authority of the **SECRETARY OF THE NAVY.**

Furnished by the coöperation of the Navy Department, through Commodore Daniel Ammen, U. S. N., Chief of Bureau of Navigation.

STATIONS AND VESSELS.	True course toward—	Hourly rate in knots.	*Barometer as reported.		Temperature of the Air.		Relative Humidity.	Wind.				Clouds.				Rain-fall or melted snow in the past 24 hours.		State of Ocean.	Direction of swell from—	Weather.	Observer.
								Direction.	Velocity		Force.	Amount.		Direction.							
												Up'er	Low'r	Up'er	Low'r						
			Inches.	Millimeters.	Fahrenheit.	Centigrade.	Per cent.	From—	Miles per hour.	Meters per second.	0—10.	0—10.	0 10.	From—	From—	Inches.	Millimeters.				
Naval Academy, Annapolis, Md.			29.85	758.2	37	2.8	.....	SSW	.....	.....	1	.....	9	.....	.....	0	0	.....	.....	Cloudy.....	
Naval Hospital, Annapolis, Md.			30.23	767.8	37	2.8	71	S	.....	.....	1	.....	7	.....	SW	0	0	.....	.....	Cloudy.....	
Navy Yard, Mare Island, Cal.			30.26	768.6	52	11.1	100	E	.....	.....	2	.....	10	.....	.....	0.338	8.58	.....	.....	Foggy	
Navy Yard, Norfolk, Va.			30.40†	772.1†	35	1.7	100	SE	.....	.....	1	.....	8k	.....	.....	.....	.....	.....	.....	Hazy.....	
Navy Yard, Pensacola, Fla.			30.38	771.6	58	14.4	86	NNE	.....	.....	1	.....	9	.....	NE	0	0	.....	.....	‡D. clouds.....	
Navy Yard, Portsmouth, N.H.			30.06	763.5	31	— 0.6	.....	SW	.....	.....	2	.....	10	.....	.....	.....	.....	.....	.....	Hazy.....	
¶ Canonicus, New Orleans, La.			30.17	766.3	54	12.2	87	ENE	.....	.....	2	.....	10	.....	W	.....	.....	.....	.....	Cloudy.....	
Colorado, New York, N. Y.			30.23	767.8	36	2.2	.....	SW	.....	.....	1	.....	9	.....	.....	0	0	.....	.....	Hazy.....	
Essex, Key West, Fla.			30.15	765.8	67	19.4	.....	N	.....	.....	5	.....	4	.....	S	.....	.....	.....	.....	‡D. clouds.....	
Hartford, Hampton Roads, Va.			30.38	771.6	43	6.1	.....	SSW	.....	.....	1	.....	8	.....	N	0	0	.....	.....	Pleasant.....	
Lackawana, Mare Island, Cal.			30.21	767.3	55	12.8	87	ESE	.....	.....	1	.....	10	.....	WNW	.....	.....	Smooth	.....	Raining.....	
Marion, Port Said, Egypt.			30.23	767.8	62	16.7	94	NW	.....	.....	2	.....	7	.....	E	.....	.....	Smooth	.....	‡D. clouds.....	
Michigan, Erie, Pa.			30.05	763.3	36	2.2	90	SW	.....	.....	3	.....	10	.....	SW	.....	.....	.....	.....	Drizzling.....	
Monongahela, Baltimore, Md.			30.17	766.3	35	1.7	.....	Calm	.....	.....	0	.....	..kn	.....	.....	.....	.....	.....	.....	Misty.....	
New Hampshire, Port Royal, S. C.			30.46	773.7	51	10.6	.....	NNE	.....	.....	1	.....	8	.....	SW	.....	.....	Smooth	.....	‡D. clouds.....	
Omaha, Panama.			30.05	763.3	74.5	23.6	93	NW	.....	.....	3	.....	1	.....	.....	0	0	mooth	.....	Pleasant. ...	
Ossipee, N. 20°, 25', W. 87°, 35'.			30.31	769.9	64	17.8	.....	E	.....	.....	3	.....	10	.....	.....	.....	.....	Short sea.	E	‡D. clouds.....	
Pensacola, Panama.			30.02	762.5	77	25.0	91	NNW	.....	.....	2	.....	1	.....	.....	.....	.....	.....	.....	Pleasant.....	
Plymouth, New Orleans, La.			30.35	770.9	59	15.0	70	NE	.....	.....	2	.....	10	.....	NE	.....	.....	.....	.....	Misty.....	
¶ Rio Bravo, Matamoras, Mex.			29.95	760.7	64	17.8	89	E	.....	.....	2	.....	9	.....	SE	.....	.....	.....	.....	Thunder.....	
Santee, Annapolis, Md.			29.78‖	756.4‖	37	2.8	90	SSW	.....	.....	1	.....	9	.....	.....	.....	.....	.....	.....	Cloudy.....	
St. Louis, League Island, Pa.			30.06	763.5	36	2.2	.....	W	3	1.3	.....	.....	8	.....	SE	0	0	.....	.....	Cloudy	
Vandalia, Constantinople, Turkey.			30.00	762.0	52	11.1	93	WSW	.....	.....	3	.....	2	.....	E	.....	.....	.....	.....	‡D. clouds....	
Wabash, Boston, Mass.			30.14	765.5	32	0.0	.....	SW	.....	.....	2	.....	9	.....	.....	.....	.....	.....	.....	Misty.....	
Wyoming, Washington, D.C.			30.37‖	771.4	37	2.8	.....	SSW	.....	.....	1	.....	2	.....	WSW	.....	.....	.....	.....	‡D. clouds.....	

* It is not known that the barometer is corrected for temperature, instrumental error or elevation. † Aneroid Barometer. ‡ Detached clouds. ¶ Barometer corrected for instrumental error and reduced to sea-level.

UNITED STATES MARINE SERIES

REPORTED TO THE OFFICE OF THE CHIEF SIGNAL OFFICER OF THE ARMY.

NAMES OF VESSELS.	True course toward—	Hourly rate in knots.	Barometer reduced to sea-level.		Temperature of the Air.		Relative Humidity.	Wind.				Clouds.				State of Ocean.	Direction of swell from—	Weather.	OBSERVER.
								Direction.	Velocity.		Force.	Amount.		Direction.					
												Up'er	Low'r	Upper.	Lower.				
			Inches.	Millimeters.	Fahrenheit.	Centigrade.	Per cent.	From—	Miles per hour.	Meters per second.	0—10.	0—10.	0—10.	From—	From—				
PACIFIC MAIL S. S. CO. MARINE SERIES. Furnished by the coöperation of ————, President; Williams, Blanchard & Co., Agents.																			
S. S. City of Peking																			Lt. Z. L. Tanner, U.S.N
OCCIDENTAL AND ORIENTAL S. S. CO. MARINE SERIES. Furnished by the coöperation of George H. Bradbury, President; T. H. Goodman, Agent.																			
S. S. Belgic																			Capt. John Metcalf.
S. S. Gaelic																			Capt. W. H. Kidley.
S. S. Oceanic																			Capt. H. Parsell.
NORTH GERMAN LLOYD OF BREMEN MARINE SERIES. Furnished by the coöperation of A. Schumacher & Co., Agents.																			
S. S. Baltimore																			Capt. H. Andressen.
S. S. Berlin																			Capt. C. Pohle.
S. S. Braunschweig																			Capt. K. Undütsch.
S. S. Nürnberg N. 39°, 29′, W. 59°, 24′	ENE ½E		30.21	767.3	42.1	5.6		NW			2–5		..ks		NW	Light swell	NNE	Blue sky	Capt. A. Jaeger.
S. S. Ohio																			Capt. G. Meyer.
MARINE SERIES. (Miscellaneous.) Furnished by the coöperation of the Observer named.																			
Schooner Addie Fuller, at Brunswick, Ga			30.19	766.8	55	12.8	56	NE	9	4.0		5ck	Haze					Detached clouds.	Capt. James Jorgenson

NOTE.—The schooner Addie Fuller gives the amount of cloudiness by the scale 0 to 4.

COLLATED AT THE OFFICE OF THE CHIEF SIGNAL OFFICER OF THE ARMY, WASHINGTON, D. C.

The records which appear in this Bulletin are copied from the regular exchanges of this office, made in each instance in compliance with an especial reques and are published for the uses of the coöperating observers. The barometric readings in the first two columns are reduced to freezing and their respective standards; those in the second two also to mean sea-level. The "weather" is generally published as given.

When the distinction between the upper and lower strata of clouds is not reported, the *kinds* or *types*, viz: cirrus, cumulus, stratus, nimbus, scud, fracto, pallio, haze, fog and smoke, as indicated, respectively, by the letters c, k, s, n, d, f, p, hz., fg. and sm'e, are generally published with the amount in the lower-cloud column. The distinction between the upper and lower strata is carefully made in the United States Series and a portion of the Canadian Series, and the types are indicated by the above letters or their combinations in the proper column.

Albert J. Myer

Brig. Gen. (Bvt. Assg^d.,) Chief Signal Officer, U. S. A.

BULLETIN

OF

INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON FEBRUARY 13, 1877.

7:35 A. M. WASHINGTON mean time.

6:7 A. M. MEXICO mean time.
7:7 A. M. SAN JOSE mean time.
0:6 P. M. LISBON mean time.
0:28 P. M. MADRID mean time.
0:48 P. M. GREENWICH mean time.
0:53 P. M. PARIS mean time.
1:1 P. M. BRUSSELS mean time.
1:4 P. M. UTRECHT mean time.
1:13 P. M. BERNE mean time.
1:26 P. M. CHRISTIANIA mean time.
1:33 P. M. COPENHAGEN mean time.
1:33 P. M. ROME mean time.
1:37 P. M. BERLIN mean time.
1:49 P. M. VIENNA mean time.
1:55 P. M. STOCKHOLM mean time.
2:18 P. M. ATHENS mean time.
2:39 P. M. CONSTANTINOPLE mean time.
2:44 P. M. ST. PETERSBURG mean time.
6:36 P. M. CALCUTTA mean time.
10:2 P. M. TOKEI mean time.

ALGERIAN SERIES.

Furnished by the coöperation of General d'Eudeville, Commandant Supérieur du Génie in Algeria.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Nemours			30.35	771.0	36.5	4.5		S			1		1			0	0	Clear	Michel.
Algiers			30.33	770.4	61.5	16.4		WSW			1		2			0	0	Clear	Biscarrat.
La Calle			30.23	767.7	59.2	15.1		NW			3		3			0	0	Fair	Fleury.
Tunis			30.19	766.8	61.2	16.2		NW			4		2			0	0	Clear	Jacques.
Sfax																			
Saida			30.35	770.8	59.0	15.0		E			2		1			0	0	Clear	Millot.
Tebessa			30.26	768.7	46.8	8.2		NW			2		0			0	0	Clear	Bourgeois.
Geriville			30.31	769.9	53.8	12.1		NNW			3		2			0	0	Clear	Lemaillot.
Laghouat			30.31	769.9	64.4	18.0		N			1		1			0	0	Clear	Guyot.
Biskra			30.23	767.7	68.4	20.2		NW			2		0			0	0	Clear	Kuntz.

NOTE.—In the originals the distinction between the amount of upper and lower clouds is apparently not made. The weather is published as given. The rain-fall is measured at 7 a. m., local time.

AUSTRIAN SERIES.

Furnished by the coöperation of Professor Dr. Julius Hann, Director of the Imperial and Royal Central Meteorological Institute at Vienna.

Agram			29.66	753.3	50.5	10.3	69	NE			2		8			0.295	7.5		Prof. Ivan Stozir.
Cracow, I. R. Observatory			29.68	753.8	30.2	— 1.0	96	NE			1		5			0	0		Dr. Wierzbiski.
Eperies			29.65	753.1	28.4	— 2.0	84	Calm			0		10			0.063	1.60		Julius Mikolik.
Gratz			29.70	754.3	48.9	9.4	52	WNW			5		10			0	0		Andreas Rospini.
Hermannstadt	28.44	722.4	29.57	751.1	28.8	— 1.8	88	ENE			1		10			0.404	10.25	Snowing	Prof. Reissenberger
Kremsmünster	28.09	713.5	29.74	755.4	38.3	3.5	88	W			4		10			1.181	30.0		Prof. C. Wagner.
Lemberg	28.37	720.6	29.60	751.8	26.2	— 3.2	94	NW			3		7			0	0		Dr. T. Stanecki.
Nyiregyhaza																			Habzsuda Daniel.
Pola			29.74	755.4	55.4	13.0	73	S			1		9c8			0	0		I.R. Hydrographic Office.
Szegedin			29.67	753.6	40.1	4.5	76	Calm			0		10			0	0		Karl Stancel.
Trieste			29.75	755 7	49.3	9.6	92	Calm			0		10			0	0	Foggy	Prof. V. Faroli.
Vienna			29.67	753.7	40.3	4.6	82	WSW			2		10			0.819	20.8		I. R. Central Met. Obs'y.

NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 7 p. m., local time. The elevation of Gratz is 843.5 meters, or 1,126.9 feet; Hermannstadt, 407.8 meters, or 1,337.0 feet; Kremsmünster, 383.6 meters, or 1,258.5 feet.

BELGIAN SERIES.

Furnished by the cooperation of J. C. Houzeau, Director of the Royal Observatory at Brussels.

Arlon			29.84	757.9	45.0	7.2	96	SW			2		10			0.362	9.2	Raining	Royal Observatory.
Brussels			29.77	756.2	49.6	9.8	86	W			2		10m		WNW	0.409	10.40	Light rain	
Furnes			29.78	756.0	50.4	10.2	88	W			4		7			0.266	6.3		
Maeseyck			29.93	760.3	47.1	8.4	96	W			4		10			0.138	3.5	Raining	

NOTE.—In the originals, the weather is occasionally given in general notes.

BRITISH SERIES

Furnished by the cooperation of Robert H. Scott, Esq., Director of the Meteorological Office, London, Alexander Buchan, Secretary of the Scottish Meteorological Society, Edinburgh, and the respective Observers.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Aberdeen			29.53	750.5	42.0	5.6		WSW	9	4.0			3			0.550	13.97	Blue sky	William Boswell.
Ardrossan			29.58	751.3	48	8.9		W			3		8					Overcast	William McNeil.
Armagh, Observatory			29.69	754.1	44.0	6.7		SSW	12	5.4			10					Overcast	S. Call, for Dr. Robinson.
Bidston (Liverpool Obs.)			29.70	754.4	44.0	6.7		W	20	8.9			10					Raining	John Hartnup.
Birr Castle, (Parsonstown)																			J. Dreyer.
Bradford			29.65	753.1	46.9	8.3		W			2		10			0.05	1.3	Gloomy	J. McLandsborough.
Bridgetown, (Barbados)			30.04	763.0	80.2	26.8		NE			3		5					*D. clouds	Sergt. J. F. Halanen, A.
Cambridge, Observatory			29.74	755.4	48.0	8.9		WSW			1		10					Raining	H. Todd. [H.C.
Cardington			29.74	755.4	46.0	7.8		NW			1		10					Overcast	John McLaren.
Carlisle																			T. Bell, for J. Cartmell.
Chatham, School M. E.			29.92	760.0	50.2	10.1		NW			2		6					Drizzling	Capt. Fellows, R. E.
Dartmoor	28.42	721.9	29.92	760.0	49.6	9.8		W			6		10					Rain & fog	R. E. Power.
Davos Platz, (Switzerland)	24.55	623.6			33.2	0.7	85	Calm			0		10			2.848	72.34	Snowing	Francis Redford, M. A.
Donaghadee			29.65	753.1	46	7.8		W			3		8					*D. clouds	J. Mac Gowan.
Dover			29.76	755.9	51	10.6		WSW			2		8					Overcast	J. Costello.
Eccles, (near Manchester)			29.60	754.1	45.2	7.3		WSW	7.6	3.4			10					Raining	Thomas Mackereth.
Falmouth, Observatory			29.91	759.7	53.8	12.1		W			7		10					Squally	The Staff.
Fort Napier, (Natal)	27.66	702.6	29.90	759.4	79.2	26.2		E			2		8					*D. clouds	P'vt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.88	758.9	92	33.3		NE			1		4					*D. clouds	
Galway, Queen's College			29.66	753.4	48	8.9		W			6		10					Raining	Prof. A. H. Curtis.
Gibraltar, (Mediterranean)			30.35	770.9	64.5	18.1		NW			2		0					Blue sky	Corpl. C. Aitken, A.H.C.
Glasgow, Observatory			29.57	751.1	46.4	8.0		W			1		7					*D. clouds	Lewis Stuart.
Great Yarmouth			29.69	754.1	48	8.9		W			3		4					Hazy	G. T. Watson.
Greenwich, Royal Obs'y			29.76	755.9	49.2	9.6		WSW			1		10					Raining	The Staff, for G. B. Airy.
Guernsey			29.93	760.2	53.5	11.9		SW			6		10					Drizzling	Dr. S. E. Hoskins.
Helston			29.95	760.7	53	11.7		W			4		10n			0.27	6.9	Overcast	M. P. Moyle.
Holyhead			29.71	754.6	46	7.8		W			1		5					Raining	John Tilston.
Kew, Observatory			29.77	756.1	50.0	10.0		SW	8	3.6			10					Raining	The Staff.
Kingstown			29.71	754.6	47	8.3		ESE			1		10					Raining	George Mitchell.
Leicester Museum			29.74	755.4	47.6	8.7		W			4		10					Drizzling	Wm. J. Harrison, F.G.S.
Malta, (Mediterranean)			30.10	764.5	60.2	15.7		NW			2		8					Overcast	Corp'l. P. Bravis, A.H.C.
Nairn			29.47	748.5	45	7.2		WSW			1		2					¾ clouded	W. D. Penny.
Nassau, (Bahamas)			30.03	762.7	73.0	22.8		N			5		4					*D. clouds	Surg. Maj. Henry.
Nottingham, Observatory			29.73	755.1	46.0	7.8		WSW			2		10n		WSW	0.068	1.73	Raining	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			29.73	755.1	45.2	7.3		WSW			1		10					Raining	Rev. Stephen Whitty.
Oxford, Radcliffe Obs'y			29.75	755.6	49	9.4		Calm			0		10					Raining	J. Lucas.
Plymouth			29.88	758.9	54.5	12.5		W			4		10					Overcast	John Merrifield.
Roche's Point			29.78	756.4	54	12.2		WNW			6		10					Overcast	W. Kennedy.
Saint Ann's Head			29.72	754.9	51	10.6		W			7		10					Overcast	John C. Walker.
Saint Helier, (Jersey)			29.96	761.0	53.0	11.7		W			6		10					Overcast	A. P. Amy.
Sandwick Manse, (Orkneys)			29.44	747.8	38.9	3.8		SW	11	4.9			4					*D. clouds	Rev. C. Clouston, LL. D.
Scarborough																			F. Shaw.
Scutari Cemetery, (Turkey)			29.66	753.4	53.0	11.7		SW			3		7			Hail	Black	*D. clouds	Sergt. W. H. Lyne.
Sheffield			29.67	753.6	49.0	9.4		WNW			3		10			0.017	0.43	Overcast	W. F. Cooper.
Silloth Rectory			29.63	752.6	45.5	7.5	89	W			2		7			0.060	1.52	*D. clouds	Rev. Francis Redford
Stonyhurst, Observatory			29.67	753.6	45.7	7.6		W			3		10					Overcast	Rev. S. J. Perry.
Stornoway, Lews C., (Hebr.)			29.46	748.3	44	6.7		W			3		5					*D. clouds	John Smith.
Stratfield Turgiss			29.78	756.4	49.6	9.8		SW			1		10					Raining	Rev. Charles H. Griffith.
Thurso			29.44	747.8	40	4.4		SSW			1		8					Gloomy	John Trotter.
Truro, Royal Institution			29.92	760.0	55	12.8		W			8		10					Gloomy	W. Newcombe.
Valencia, Observatory			29.81	757.2	52.6	11.4		WSW	27	12.1			10					Drizzling	The Staff.
SUB-SERIES.																			
Calf of Man, (Isle of Man)																			Henry Mercer,
Cape Good Hope, Obs'y			30.06	763.5	81.0	27.2	54	S	4	1.8		6	2						The Staff, for E. J. Stone.
Hobart Town, (Tasmania)			29.90	759.4	71.5	21.9	83	Calm			0		10n			0.02	0.5	Cloudy	Francis Abbott, F.R.A.S.
Leith, Restalrig Park			29.60	751.8	45.9	7.7		W			2		9k			0.04	1.0	Fine	Andrew Gibb.
Mauritius, Observatory			29.62	752.3	79.8	26.6	74	W	20.8	9.3						0.54	13.7		C. Meldrum.
Melbourne, Observatory			30.06	763.5	61.4	16.3	81	SE	3	1.3			4			0.46	11.7	Fine	R. L. J. Ellery.
Monach L't-house, (Hebrides)																			J. Youngclause.
North Unst, (Shetland Is.)			29.46	748.3	38	3.3		S			6	5	5	SW					Robert Burnet.

NOTE.—Generally, the originals do not give the relative humidity, rain-fall, or distinction between upper and lower clouds. The originals give the wind direction to 32 points and weather by the Beaufort notation. The originals give the barometer for Aberdeen, Cardington, Freetown, Galway, Oxford, St. Helier, Sandwick, Scarborough, Stonyhurst, Leith, Monach and North Unst as read off and the amount of cloudiness for Stornoway by the scale 0 to 4. The wind-force is given by the scale 0 to 12 in the official series; 0 to 6 in the sub-series; except in lbs. per square foot for Greenwich and Hobart Town. The rain-fall is measured at Aberdeen at 10 a. m.; Bradford, 9 a. m.; Hobart Town, 7:30 a. m.; Nottingham, 6 p. m.; Mauritius, 9 a. m., local time. The elevation of Dartmoor is 1,400 feet, or 426.7 meters; Davos Platz, 5,152 feet, or 1,556.0 meters; Fort Napier, 2,200 feet, or 670.6 meters. *Detached clouds.

By authority of the MINISTER OF FOREIGN AFFAIRS.

COSTA RICA SERIES.

Furnished by the cooperation of Senor Federico Maison, Director of the Central Office of Statistics and Meteorology.

San José																			

DANISH SERIES.

Furnished by the cooperation of Captain N. Hoffmeyer, Director of the Royal Danish Meteorological Institute at Copenhagen.

Copenhagen			29.76	756.0	29.3	— 1.5	86	SE			2		2						
Fanöe			29.64	752.9	31.5	— 0.3	89	SSE			6		9						
Godthaab, (Greenland)			29.87	758.7	14.0	—10.0	100	NW			4		10					Snowing	
Stykkisholm, (Iceland)			29.71	754.5	23.5	— 4.7	93	E			4		0						
Thorshavn, (Faröe)			29.30	744.3	40.6	4.8	84	NE			4		10						
Vestervig			29.62	752.4	28.8	— 1.8	96	SE			6		10						

NOTE.—The originals give the wind-force by the scale 0 to 6; occasionally, weather by Vienna symbols; no distinction between the amount of upper and lower clouds.

FRENCH SERIES.

Furnished by the co operation of His Excellency, U. J. Le Verrier, Director of the Paris Observatory, and the respective Observers.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Upper. 0—10.	Clouds. Amount. Low'r. 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather	Observer.
Alençon	.....	.....	30.04	763 0	50.0	10	90	W	.....	.....	2	.....	10	.....	.....	0.165	4.2	Covered	Normal School.
Amiens	.....	.....	29.83	757.6	52.0	11.6	75	W	.....	.....	3	.....	10	.....	.....	0.465	11.8	Covered	Normal School.
Avignon	.....	.....	30.05	763.2	69.8	21	37	NW	.....	.....	6	.....	0	.....	.....	0	0	Clear.....	Normal School.
Bar-sur-Seine	.....	.....	29.93	760.1	53.1	11.7	94	SSW	.....	.....	2	.....	10	.....	W	0.803	20.4	Raining.....	C. Saillard.
Beaumette, (near Angers)	.....	.....	30.08	763.9	56.3	13.5	79	SW	21.0	9.4	.....	.....	10	.....	W	0.020	0.5	Raining.....	Beaumette Observ'tory.
Beauvais	.....	.....	29.87	758.7	54.1	12.3	87	W	.....	.....	3	.....	10	.....	W	0.561	14.25	Covered	Normal School.
Besançon	.....	.....	29.99	761.7	53.2	11.8	94	SW	.....	.....	4	.....	8	.....	SW	1.071	27.2	Very cloudy	Normal School.
Bourg en Bresse	.....	.....	30.19	766.7	53.2	11.8	93	NW	.....	.....	2	.....	10kn	.....	SE	0.848	21.4	Covered	Normal School.
Bourges	.....	.....	30.07	763.7	53.2	11.8	98	WSW	.....	.....	8	.....	10	.....	WSW	0.252	6.4	Covered	Normal School.
Brest	.....	.....	30.02	762.4	54.1	12.3	87	W	.....	.....	5	.....	10	.....	W	0.276	7.00	Foggy	Naval Observatory.
Carcassonne	.....	.....	30.25	768.3	58.1	14.5	72	W	.....	.....	2	.....	5	.....	E	0.130	3.3	Cloudy.....	Normal School.
Caen	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Chartres	.....	.....	29.87	758.8	55.4	13	97	WSW	.....	.....	4	.....	10	.....	E	0	0	Covered	Normal School.
Châlons-sur-Marne	.....	.....	29.87	758.8	49.6	9.8	87	NW	.....	.....	3	.....	10	.....	.....	0.449	11.4	Raining.....	Normal School.
Clermont	.....	.....	30.08	764.1	56.5	13.6	71	W	.....	.....	6	.....	8	.....	WSW	0.106	2.7	.....	Puy de Dome Obs'y.
Commercy	.....	.....	29.94	760.4	47.7	8.7	93	W	.....	.....	2	.....	10	.....	.....	0.418	10.5	Covered	Normal School.
Commune de Gréasque*	.....	.....	30.06	763.5	63.5	17.5	49	NW	.....	.....	6	.....	5	.....	NW	0	0	.....	M. Kina.
Grenoble	.....	.....	30.13	765.3	48.7	9.3	84	SE	.....	.....	2	.....	10n	.....	.....	0.51	13.	Raining.....	Normal School.
La Roche-sur-Yon	.....	.....	30.19	766.8	56.1	13.4	82	SW	.....	.....	4	.....	2	.....	E	0.433	11.0	Slightly cl'dy	Normal School.
Le Mans	.....	.....	30.00	762.1	55.8	13.2	84	W	.....	.....	4	.....	8	.....	W	0.205	5.2	Very cloudy	Normal School.
Lons-Le-Saulnier	.....	.....	30.04	763.1	52.7	11.5	90	WSW	.....	.....	2	.....	10	.....	.....	0.587	14.90	Raining.....	Normal School.
Lorient	.....	.....	30.13	765.3	54.7	12.6	83	W	.....	.....	8	.....	10	.....	.....	0.232	5.9	Raining.....	Naval Observatory.
Mâcon	.....	.....	30.15	765.8	56.7	13.7	75	SW	.....	.....	4	.....	10	.....	.....	0.264	6.7	Covered	Normal School.
Metz	.....	.....	29.91	759.7	46.9	8.3	88	SW	.....	.....	3	.....	10	.....	.....	0.201	5.1	Covered	M. Schuster.
Mirecourt	.....	.....	30.08	764.1	48.2	9	92	NW	.....	.....	2	.....	10	.....	SE	0.12	3.	Covered	Normal School.
Nismes	.....	.....	30.09	764.2	61.2	16.2	52	NW	.....	.....	8	.....	..cn	.....	W	0	0	.....	Normal School.
Orleans	.....	.....	29.97	761.3	54.3	12.4	93	NW	.....	.....	6	.....	10	.....	NW	0.20	5.	Covered	Normal School.
Paris, Observatory	.....	.....	29.91	759.6	55.0	12.8	88	W	.....	.....	2	.....	10kn	.....	W	0.426	10.83	Rainy.....	National Observatory.
Parthenay	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Privas	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Rochefort, Observatory	.....	.....	30.13	765.3	61.5	16.4	47	W	.....	.....	2	.....	5	.....	W	0	0	Cloudy.....	Normal School.
Rouen	.....	.....	30.21	767.4	55.4	13.0	90	SW	.....	.....	5	.....	10	.....	W	Inap.	Inap.	Raining.....	Naval Observatory.
Saint Lo	.....	.....	29.88	758.9	54.5	12.5	87	W	.....	.....	4	.....	10	.....	W	0.744	18.9	Covered	Normal School.
Tarbes	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Villefranche	29.26	743.1	30.35	770.8	56.3	13.5	80	W	.....	.....	4	.....	8	.....	E	0	0	Very cloudy	Normal School.
	.....	.....	30.09	764.3	57.2	14	81	NW	.....	.....	6	.....	10	.....	NW	0.288	7.2	Covered	Normal School.
SUB-SERIES.																			
Fort de France, Martinique	.....	.....	29.82	757.3	77.7	25.4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	L'Abbé Marchési.
Marseilles	.....	.....	30.01	762.3	65.5	18.6	56	WNW	.....	.....	4	.....	5	.....	.....	0	0	Partly cl'dy	Marseilles Observatory.
Mont-Louis	25.05	636.2	30.36	771.2	50.9	10.5	63	W	9.3	4.17	.....	.....	8	.....	W	0	0	.....	—. Falguère.
Montsouris, Paris	.....	.....	29.90	759.4	55.2	12.9	91	W	.....	.....	2	.....	10	.....	W	0.394	10.0	.....	Montsouris Observatory
Perpignan	.....	.....	30.22	767.5	67.5	19.7	57	NW	28.0	12.50	.....	.....	6	.....	NW	0	0	.....	Dr. Fines.
Pic du Midi, (Summit,) H. P.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. Baylac.
Pic du Midi, (Plantade,) H. P.	22.73	577.3	.....	.....	35.2	1.8	.....	W	.....	.....	4	.....	5	.....	.....	0.051	1.3	Rainy	General de Nansouty.
Saint Maur, (near Paris)	.....	.....	29.91	759.7	55.4	13.0	88	W	.....	.....	3	.....	10	.....	.....	0.362	9.2	Covered	E. Renou.
Toulouse	.....	.....	30.34	770.7	55.4	13.0	85	W	.....	.....	4	.....	9	.....	.....	0.028	0.7	.....	Toulouse Observatory.
Tours	.....	.....	30.07	763.8	56.5	13.6	84	W	.....	.....	3	.....	10	.....	WNW	0.343	8.7	.....	C. Marquet.
Versailles, (near Paris)	.....	.....	29.92	759.9	54.7	12.6	93	WNW	.....	.....	3	.....	10	.....	.....	0.470	11.92	Light rain....	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai)	.....	.....	30.50	774.7	29.8	— 1.2	69	NNW	0.7	0.3	.....	.....	0	.....	.....	0	0	.....	Marc Dechevrens, S. J.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—Generally, the originals give the wind-force by the scale 0 to 7; no distinction between upper and lower clouds, and, in the official series, the amount by the scale 0 to 4 the rain-fall as measured at 7, 8 or 9 a. m., local time; at Clermont, 9 a. m. of the following day; the weather in general terms as published. The elevation of Clermont is 388 meters, or 1,272.9 feet; Commune de Gréasque, 322 meters, or 1,058.4 feet; Tarbes, 308 meters, or 1,010 feet; Mont-Louis, 1,586.40 meters, or 5,204.8 feet; Pic du Midi, (Summit,) 2,877 meters, or 9,439.1 feet; Pic du Midi, Plantade,) 2,366 meters, or 7,762.6 feet. In correcting the Mont-Louis barometric observations for altitude, the constant 135. millimeters has been added. *Bouches-du-Rhône

GERMAN SERIES.

Furnished by the coöperation of Professor Dr. G. Neumayer, Director of the German Naval Observatory, Hamburg.

Bamberg	.....	.....	29.71	754.5	45.5	7.5	82	W	.....	.....	5	.....	9	W	.....	0.236	6.0	.....	Prof. T. Hoh.
Berlin	.....	.....	29.72	755.0	32.9	0.5	81	SE	.....	.....	1	.....	10	.....	.....	0.161	4.1	.....	Prof. Arndt.
Breslau	.....	.....	29.66	753.4	29.1	— 1.6	90	ESE	.....	.....	2	.....	3	.....	.....	0.287	7.3	.....	Royal University Obs'y.
Carlsruhe	.....	.....	29.80	756.8	46.0	7.8	88	SW	.....	.....	3	.....	10	.....	.....	0.295	7.5	Raining.....	A. Senz.
Cassel	.....	.....	29.72	755.0	41.0	5.0	98	NW	.....	.....	3	.....	10	W	.....	0.268	6.8	.....	Dr. H. Möhl.
Crefeld	.....	.....	29.70	754.4	47.8	8.8	87	W	.....	.....	3	.....	9	.....	.....	0.24	6.	Raining.....	Director Lose.
Emden	.....	.....	29.72	755.0	43.9	6.6	94	NW	.....	.....	2	.....	4	.....	.....	0.035	0.9	.....	Prof. Prestel.
Frankfort on the Main	.....	.....	29.82	757.5	48.4	9.1	78	WSW	.....	.....	1	.....	10	.....	.....	0.110	2.8	.....	Physical Society.
Friedrichshafen	28.44	722.3	29.80	756.3	45.1	7.3	94	W	.....	.....	4	.....	10	.....	.....	2.204	56.0	.....	M. Wilhelm.
Hamburg	.....	.....	29.71	754.7	31.8	— 0.1	94	SE	.....	.....	2	.....	10	.....	.....	0.335	8.5	Light snow.	Captain F. Hegemann.
Kiel	.....	.....	29.68	753.8	33.1	0.6	93	ESE	.....	.....	5	.....	10	.....	.....	0.142	3.6	.....	Prof. G. Karsten.
Königsberg, (Prussia)	.....	.....	29.76	756.0	23.2	— 4.9	82	W	.....	.....	2	.....	5	.....	.....	0	0	.....	Prof. E. Luther.
Köslin	.....	.....	29.80	756.9	27.5	— 2.5	.....	.....	.....	.....	.....	.....	2	.....	.....	0	0	.....	H. Müller.
Leipsic	.....	.....	29.67	753.7	34.6	1.4	100	NW	.....	.....	1	.....	10	.....	.....	0.339	8.6	Rain & snow	Prof. Bruhns.'
Memel	.....	.....	29.77	756.2	18.3	— 7.6	80	S	.....	.....	1	.....	9ks	.....	.....	0.020	0.5	Snowing.....	Reinbrecht & Skalweit.
Münster	.....	.....	29.65	753.2	44.2	6.8	91	SW	.....	.....	3	.....	10	.....	.....	0.370	9.4	.....	Prof. E. Heis.
Neufahrwasser	.....	.....	29.76	756.0	29.8	— 1.2	67	N	.....	.....	2	.....	7	.....	.....	0	0	.....	A Lothe.
Posen	.....	.....	29.74	755.3	29.7	— 1.3	66	NE	.....	.....	6	.....	1	.....	.....	0	0	.....	Dr. Magener.
Strassburg, (in Alsace)	.....	.....	29.87	758.7	48.2	9.0	91	SW	.....	.....	2	.....	10	.....	.....	0.287	7.3	Raining.....	Dr. Schur.
Stuttgart	.....	.....	29.82	757.4	45.3	7.4	83	W	.....	.....	1	.....	10	.....	.....	0.882	22.4	Raining.....	Prof. Schoder.
Thorn	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Dr. Hasenbalg.
Treves, (Trier)	.....	.....	29.72	755.0	49.1	9.5	84	WSW	.....	.....	5	.....	10	.....	.....	0.480	12 2	Foggy	Prof. Flesch.
Weissenburg, (Bavaria)	28.24	717.3	29.78	756.3	40.8	4.9	84	W	.....	.....	4	.....	10	.....	.....	0.563	14.3	Raining.....	Dr. von Bebber.
Wustrow, Naval School	.....	.....	29.80	756.9	31.1	— 0.5	87	SE	.....	.....	2	.....	10	.....	.....	0	0	.....	E. F. Schütz.
GERMAN NAVAL SERIES.																			
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—The elevation of Friedrichshafen is 418.4 meters, or 1,356.8 feet; Weissenburg, 431 meters, or 1,414.6 ft. In the originals the distinction between the amount of upper and lower clouds is not made. It is not always certain that the remarks in the weather column refer to the moment of observation.

GREEK SERIES.

Furnished by the coöperation of Professor Dr. J. F. Julius Schmidt, Director of the Royal Observatory at Athens.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Athens			29.85	758.1	61 0	16 1		SW										Clear	

Note.—The originals give the barometer corrected, but not reduced to sea-level; occasionally the kind of clouds; the weather as published. They omit the humidity, wind-force, amount of cloudiness and rain-fall.

INDIAN SERIES.

Furnished by the coöperation of H. F. Blanford, Meteorological Reporter to the Government of India.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Kurrachee																			
Deesa																			
Bombay																			
Poona																			
Lahore																			
Belgaum																			
Bangalore																			
Rorkee																			
Agra																			
Trichinopoly																			
Nagpur																			
Madras																			
Lucknow																			
Allahabad																			
Patna																			
Hazaribagh																			
Cuttack																			
Calcutta (Alipore)																			
Goalpara																			
Chittagong																			
Sibsagar																			
Rangoon																			
Jubbulpore																			

ITALIAN SERIES.

Furnished by the cooperation of His Excellency the Minister of Agriculture, Industry and Commerce, and the respective Observers.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Udine			29.73	755.2	48.6	9.2	63	Calm	0	0			10			0	0		Prof. Giovanni Clodig
Stelvio	21.91	556.6			28.4	— 2.0		W			8		10			0.138	3.5	Snowing	Signora Ernesta Manfredi.
Valdobbia	22.00	558.7			29.7	— 1.3	100	W			8		10			Inap	Inap.	Snowing	Ab. Dom. Mongini.
Padua			29.72	754.8	45.3	7.4	83	E	1.8	0.8			3			0	0		Prof. Dott. Lorenzoni.
Vicenza			29.72	754.8	49.8	9.9	64	E	3.1	1.4			5	W		0	0		Conte Alm. Da Schio.
Verona			29.72	755.0	48.9	9.4	80	SE			6		0			0	0		Dott. B. Bertoncelli.
Bergamo																			Prof Trionfini Carlo.
Domodossola			29.78	756.5	50.0	10.0	88	Calm			0		10			0.051	1.3	Raining	Prof. Giuseppe Ulza
Milan			29.71	754.7	61.3	16.2	68	WNW			4		2	W		0.004	0.1	Foggy	Ab. Gio. Capelli
Pavia			29.68	753.8	54.9	12.7	71	W			4		1			0	0		Prof. Gio. Cantoni.
Moncalieri			29.73	755.1	54.3	12.4	68	ESE	9.8	4.4			4	N		0	0		Prof. P. F. Denza.
Mondovi																			Prof. L. C. Bruno.
Porto Maurizio			29.86	758.5	56.3	13.5	75	E			4		8	NNW		0	0		Prof. . . Vassallo.
Genoa			29.84	758.0	57.0	13.9	67	S	6.3	2.8			10	S		0	0		Prof. G M Garibaldi.
Piacenza			29.72	754.9	55.0	12.8	67	W	11.2	5.0			3	NW		0	0		Dott. G. Sanzi.
Parma			29.81	757.1	53.6	12.0	76	SE			4		2			0	0		Prof. P. Pigorini.
Florence			29.88	758 9	54.5	12.5	83	S			2		10			0.01	0.3	Light rain	Cav. F. Meucci.
Leghorn			29.86	758.5	56.8	13.8	79	SW	9.8	4.4			10	WSW		0	0		Prof. P. Monte.
Siena	28.65	727.6	29.87	758.7	53.4	11.9	73	SW	0	0			10	W		0	0		Prof. L. Toscani.
Urbino	28.24	717.2	29.83	757.6	53.4	11.9	73	SW			0		4			0	0		Prof. P. Serpieri.
Pesaro			29.76	755.9	52.7	11.5	74	N	19.2	8.6			10	W		0	0		Prof. Luigi Guidi.
Ancona			29.75	755.6	61.3	16.2	54	SW			4		2			0	0		Prof. F. De— Bosis.
Grosseto			29.87	758.8	59.4	15.2	60	SSE			2		7	S		0	0		Avv. P. Pontecelli.
Rome			29.89	759.2	62.2	16.8	55	SSW	1.3	0.6			5			0	0		Prof's. P. Secchi & L. Respighi
Naples, O. U			29.91	759.7	62.4	16.9	64	WSW			4		6	NW		0	0		Prof. L. Palmieri.
Lecce			29.90	759.4	57.6	14.2	65	W	16.1	7.2			4	W		0	0		Prof. C. De—Giorgi.
Cosenza			30.02	762.5	55.0	12.8	71	NW	1.3	0.6			10			0.118	3.0	Raining	Prof. F. D. Conti.
Cagliari			30.02	762.6	62.6	17.0	56	NW			6		8	WNW		0	0		Prof. A. Pacinotti.
Ilposto, (Sicily)			29.95	760.6	62.6	17.0	56	SW			2		4	N		0	0		Prof. F. Cafiero.
Palermo			30.00	762.0	60.6	15.1	63	W	18.1	8.1			10	W		0	0		Prof. G. Cacciatore.
Caltanissetta	28.07	713.0	30.06	763.4	52.0	11.1	55	WSW			6		5	SW		0	0		Prof. A. Pagani.
Siracusa			30.02	762.4	64.0	17.8	53	W			4		9	W		0	0		Prof. V. Giuliano.
Sub-Series.																			
Naples, S. R.			29.94	760.5	58.6	14.8	73	SW	2.7	1.1			10	SW		0	0		Prof. F. Brioschi

Note.—The originals give the wind-force by the scale 0 to 4, or the velocity in kilometers per hour; generally, no distinction between upper and lower clouds occasionally the weather by the Vienna symbols. The elevation of Stelvio is 2,543.0 meters, or 8,342.9 feet; Valdobbia, 2,548.0 meters or 8,359.3 feet; Bergamo, 379.6 meters, or 1,245.3 feet; Monodovi, 556 meters, or 1,824.2 feet; Siena, 348.5 meters, or 1,143.3 feet; Urbino, 451 meters, or 1,479.7 feet; Caltanissetta, 570.3 meters, or 1,871.0 feet.

JAPANESE SERIES.

Furnished by the coöperation of the Imperial University of Tokei, Japan.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Tokei																			Prof. P. V. Veeder.

Note.—The originals give the amount of cloudiness by the scale 0 to 4 without distinguishing between upper and lower clouds. The rain-fall is measured at 7 a. m., local time.

By authority of the SECRETARY OF PUBLIC WORKS.

MEXICAN SERIES.

Furnished by the coöperation of Senor Mariano Barcena, Director of the Central Meteorological Observatory in the City of Mexico.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Mexico																			Mariano Barcena.
																			Vicente Reyes.
																			Miguel Perez.

NOTE.—The elevation of Mexico is 2,290 meters, or 7,512.9 feet. The rain-fall is measured at 6 a. m., local time. (Engineers in charge.)

NETHERLANDS' SERIES.

Furnished by the coöperation of Professor Buys Ballot, Director of the Royal Meteorological Institute of the Netherlands at Utrecht.

Flushing			29.78	756.5	48.0	8.9		WSW			4					0.028	0.7		
Groningen			29.59	751.6	45.7	7.6										0.366	9.3		
Helder			29.65	753.2	45.7	7.6		W			4					0	0		
Utrecht			29.67	753.5	49.6	9.8	76	WNW			4		8			0.047	1.2	Very cloudy	

NOTE.—The originals give the wind-pressure in *kilograms per square meter*; for Utrecht, they give the weather as published, from which the amount of cloudiness is taken by the scale 0 to 4, without distinguishing between upper and lower clouds. It is assumed that the barometer readings have been reduced to sea-level.

NORWEGIAN SERIES.

Furnished by the coöperation of Professor H. Mohn, Director of the Royal Norwegian Meteorological Institute at Christiania.

Bergen			29.50	749.2	30.2	— 1.0	73	Calm	0	0			8			0	0		
Bröno			29.65	753.1	28.4	— 2.0	76	S	13.4	6			3			0.362	9.2		
Christiania			29.80	756.8	12.4	—10.9	79	W	0	0			8			0	0	Light fog	
Tromsö			29.68	751.3	20.8	— 6.2	61	W	24.6	11			1			0	0		

NOTE.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols. The cloudiness and weather at Bergen refer to 2h., p. m., local time, instead of 1h., 4 min.

PORTUGUESE SERIES.

Furnished by the coöperation of J. C. de Brito Capello, Director of the Meteorological Observatory of the Infante Don Luiz at Lisbon.

Angra, (Azores)			29.95	760.7	58.3	14.6	89	SW	10.5	4.7			9			0.488	12.4	Raining	Dr. J. A. Sampaio.
Campo Major			30.39	772.0	50.7	10.4	82	NE	3.8	1.7			2			0	0		Dr. A. M. R. dos Santos.
Funchal, (Madeira)			30.36	771.1	62.6	17.0	61	ESE	6.3	2.8			8			0	0		Capt. D. A. de Cunha.
Lisbon			30.44	773.2	57.9	14.4	71	NNE	6.3	2.8			0			0	0		The Observatory.
Ponta Delgada, (Azores)			30.11	764.7	62.2	16.8	80	S	15.4	6.9			10			0	0		

NOTE.—The originals give the wind-velocity in kilometers per hour; occasionally, the weather by the Vienna symbols; the amount of cloudiness without distinguishing between upper and lower clouds; the barometer corrected but not reduced to sea-level. The rain-fall at Libson is measured at noon, instead of 0 h. 6 m., p. m.

RUSSIAN SERIES.

Furnished by the cooperation of Professor H. Wild, Director of the Imperial Central Physical Observatory of Russia, at St. Petersburg.

Warsaw			29.74	755.4	19.8	— 6.8	89	NNE	7	3			10						Astronomical Obs.
Wilna			29.69	754.2	10.8	—11.8	81	W	2	1			1						Astronomical Obs.
Dorpat			29.78	746.4	— 0.8	—18.2	84	NW	4	2			1						Physical Cabinet.
St. Petersburg			29.79	756.7	— 2.9	—16.4	83	NE	4	2			10						Central Physical Obs.
Kuopio			29.88	759.0	— 3.6	—19.7	81	Calm	0	0			0						Ch. Forsten.
Kieff			29.30	744.1	17.8	— 7.9	80	NW	27	12			10						Physical Cabinet.
Nikolaiev			29.48	748.8	29.3	— 1.5	62	W	34	15			9						Kurdakof.
Kertch			29.59	751.6	34.5	1.4	74	WSW	13	6			6						Lagorio.
Moscow			29.58	750.7	9.0	—12.8	76	NNW	4	2			10						Meteorological Obs.
Lugan			29.16	740.7	27.1	— 2.7	77	WSW	34	15			8			Blank	Blank		Meteorological Obs.
Archangel			29.98	761.6	—15.2	—26.2	79	Calm	0	0			0						Ogorodnikof.
Tiflis	28.47	723.0	29.90	759.5	48.7	9.3	34	Calm	0	0			7						Physical Observatory.
Astrakhan			29.60	751.7	37.0	2.8	69	S	18	8			10			Blank	Blank		Sebastianof.
Kasan			29.67	753.6	10.0	—12.2	93	SE	7	3			10					Light snow	Physical Cabinet.
Orenburg			29.98	761.5	9.1	—12.7	84	SE	16	7			10						Tschernischef.
Ekaterinburg	29.15	740.3	30.23	767.8	—11.9	—24.4	75	Calm	0	0			10						Meteorogical Obs.
Nukuss			30.07	763.6	38 8	3.8	70	WNW	0	0			9						
Kasaly																			Bobrof.
Tashkend	28.65	727.6	30.43	772.9	39.2	4.0	74	E	13	6			10						Michelson.
Barnaul			30.37	771.4	20.7	— 6.3	95	Calm	0	0			10						Meteorological Obs.
Yeniseisk			30.19	766.8	9.7	—12.4	79	E	2	1			4						Marks.
Irkutsk																			Usolzef.
Peking, (China)			30.52	775.3	17.4	— 8.1	30	NW	25	11			0						Physical Observatory.
Nertchinsk																			Meteorological Obs.
Vladivostock																			
Nikolaievsk, on the Amoor																			

NOTE.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols; they omit the rain-fall. The elevation of Tiflis is 409 meters, or 1,341.8 feet; Ekaterinburg, 300.4 ? m., or 1,005.2 ? ft.; Tashkend, 494.2 ? m., or 1,621.3 ? ft.; Irkutsk, 392 m., or 1,286 ft.; Nertchinsk, 592.0 ? m., or 1,942.2 ? ft.

SPANISH SERIES.

Furnished by the coöperation of Antonio Aguilar, Director of the Royal Observatory at Madrid, and of Don Ceeilio Pujazon, Captain R. N. Director of the Naval Observatory at San Fernando.

Madrid			30.39	772.0	56.5	13.6	62	S	1.5	0.67		2	0	NW		0	0		Royal Observatory.
San Fernando			30.40	772.2	57.4	14.1	78	W	2.9	1.3		0	0						Naval Observatory.

NOTE.—The originals give the weather in general terms, as published; rain-fall for San Fernando from preceding to following midnight; wind-velocity for Madrid in kilometers per hour.

SWEDISH SERIES.

Furnished by the coöperation of Professor R. Rubenson, Director of the Royal Swedish Meteorological Institute, at Stockholm, and of Dr. H. H. Hildebrandsson, Chief of the Meteorological Division of the Upsala Observatory.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Haparanda			29.95	760.6	— 2.2	—19.0	100	Calm			0		4			0	0		
Umea			29.86	758.4	— 3.3	—19.6	75	N			2		6			0	0		
Hernosand			29.89	759.2	— 0.4	—18.0	95	Calm			0		5			0.031	0.8		
Stockholm			29.80	756.8	14.5	— 9.7	99	N			2		7			0.028	0.7		
Wisby			29.80	757.0	23.0	— 5.0	90	NE			4		7			0.004	0.1		
Sub-Series.																			
Upsala			29.84	757.8	8.6	—13.0	80	NNW	5.6	2.5			3	N		0	0		Dr. Hildebrandsson.

Note.—The originals give the wind-force by the scale 0 to 6, and Upsala also velocity in meters per second; occasionally, the weather by the Vienna symbols, or in general terms; no distinction between the amount of upper and lower clouds. The rain- all is measured at 8 a. m., local time.

SWISS SERIES.

Furnished by the coöperation of Professor R. Wolf, Director of the Observatory at Zurich, and of Professor E. Plantamour, Director of the Observatory at Geneva.

Geneva	28.60	726.5	30.03	762.8	52.9	11.6	83	SSW			4		10			0.740	18.8	Raining	The Observatory.
Zurich	28.24	717.4	29.91	759.7	45.9	7.7	94	W			2		10		W	1.319	33.5	Raining	The Observatory.

Note.—For Geneva the corresponding departures from the normal values are: Barometer, +0.1 mm; Thermometer, +8.1 cent.; Relative Humidity, +11 per cent.

Note.—The rain-fall is measured at Zurich at 7 a. m. on the following day. The originals give the barometer corrected but not reduced to sea-level; the wind-force by the scale 0 to 4 for Zurich; the amount of cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The elevation of Geneva is 408 meters, or 1,339 feet, and that of Zurich 470 meters, or 1,542 feet.

TURKISH SERIES.

Furnished by the cooperation of A. Coumbary, Effendi, Director of the Central Observatory at Constantinople, and of Professor C. V. A. Van Dyck, Superintendent of the Lee Observatory at Beirut.

Constantinople																			
Fao, (Persian Gulf)																			
Salonica																			
Valona																			
Varna																			
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y			30.07	763.8	63.1	17.3	76	SW			2		9n		SW	0.68	17.3	*D. clouds	Prof. C. V. A. Van Dyck.

Note.—The originals give the wind-force by the scale 0 to 7, (except Beirut, by the scale 0 to 12, and Constantinople velocity in meters per second;) the weather in general terms as published; no distinction between upper and lower clouds, and, except Constantinople and Beirut, the amount by the scale 0 to 4. It is assumed that the barometer is reduced to sea-level. * Detached clouds.

CANADIAN SERIES.

Furnished by the coöperation of Professor G. T. Kingston, Director of the Magnetic Observatory at Toronto, and Superintendent of the Meteorological Office of the Dominion of Canada, and the respective Observers. Those marked with a star (*) are also telegraphed daily to the office of the Chief Signal Officer, U. S. Army.

Bathurst, N. B			29.72	754.9	18.6	— 7.4	94	NE	25.5	11.4								Storm	Hon. J. Ferguson.
Brockville, Ontario			30.62	777.7	3	—16.1		NW	1	0.4		0	0			0.13	3.3	Clear	W. R. Bigg.
*Chatham, N. B			29.59	751.6	19	— 7.2	100	NE	25	11.2			10n		NE	0.45	11.4	Light snow	G. A. Blair.
Charlottetown, P. E. Island			29.52	749.8	34	1.1	96	E	15	6.7			10n			0	0	Cloudy	H. J. Cundall, C. E.
Cornwall, Ontario			30.55	776.0	0.0	—17.8	78	NW			1	0	0			0.100	2.54	Bright	James Smith, M. A.
Dalhousie, N. B			29.84	757.9	18.4	— 7.6	84	N			1					0.53	13.5	Snowing	H. A. Johnson.
Esquimault, B. C			30.18	766.6	36.6	2.6	91	SW				2k	0			0	0	Clear	W. H. Bevis.
*Father Point, Quebec			30.08	764.0	12	—11.1	82	N	50	22.4			5s		N	1.00	25.4	Clearing	J. McWilliams.
Fredericton, N. B			29.56	750.8	22.3	— 5.4	96	NW	9	4.0			10n			0.49	12.4	Heavy snow	Prof. Harrison.
*Fort Garry, Manitoba			30.25	768.3	18	— 7.8	92	S	27	12.1		2c	5ks	SW	SW	0	0	Fair	James Stewart.
Goderich, Ontario			30.83	783.1	9.2	—12.7	70	N			3	0	0			0	0	Clear	H. J. Strang, M. A.
Granton, Ontario	29.53	750.4	30.77	781.5	5.6	—14.7		NE			1	0	0			Inap.	Inap.	Clear	James Grant.
*Halifax, N. S			29.53	760.0	33	0.6	98	SW	14	6.3			10n			Inap.	Inap	Cloudy	F. Allison, M. A.
Hamilton, Ontario			30.81	782.6	11.7	—11.3	74	W			1	0	0			0	0	Clear	G. Dickson.
Heart's Content, N. F			30.11	764.8	19	— 7.2	100	SE			1		10			0	0	Overcast	E. Weedon.
*Kingston, Ontario			30.69	779.5	5	—15.0	82	N	3	1.3		0	0			0.01	0.3	Clear	S. Woods, M. A.
*Montreal, Quebec			30.40	772.1	2	—16.7	64	NW	28	12.5		0	0			0.19	4.8	Clear	C. H. McLeod, C. E.
*Ottawa, Ontario			30.54	775.7	0	—17.8	91	W	16	7.2		0	0			0.10	2.5	Clear	J. B. Haney.
*Parry Sound, Ontario			30.83	783.1	— 1	—18.3	52	NW	6	2.7		0	0			0	0	Clear	Rev. R. Mosley.
Port Dover, Ontario			30.76	781.3	11	—11.7	80	NW	10	4.5		0	0			0	0	Clear	H. Morgan.
Port Hastings, N. S			29.54	750.3	35.4	1.9		S	3	1.3						0.50	12.7	Raining	Peter Grant
Port Stanley, Ontario			30.77	781.5	10	—12.2	88	NW	4	1.8		0	0			Inap.	Inap	Clear	M. Payne.
*Quebec, Quebec			30.16	766.1	4	—15.6	74	W	12	5.4		0	0			0.40	10.2	Clear	Capt. Ashe, R. N.
*Rockliffe, Ontario			30.79	782.1	— 3	—19.4	90	NW	8	3.6		0	0			0	0	Clear	
St. John, N. B			29.44	747.8	32	0.0	94	NW	13	5.8			10n			0.26	6.6	Light snow	G. Murdoch, C. E.
*Saugeen, Ontario			30.80	782.3	6	—14.4	67	Calm	0	0		0	0			0	0	Clear	K. Stewart.
Stayner, Ontario			30.80	782.3	5	—15.0	80	NW	9	4.0		0	0			Inap.	Inap.	Clear	R. J. Cole.
Stratford, Ontario	29.36	745.7	30.81	782.6	4.4	—15.3	95	N	3	1.3		0	0			Inap.	Inap.	Fine	C. J. MacGregor, M. A.
*Sydney, C. B			29.76	755.9	31	— 0.6	97	SE	8	3.6				Fog		0	0	Cloudy	T. C. Hill.
*Toronto, Ontario			30.79	782.1	7	—13.9	71	NW	7	3.1		0	0			0.03	0.8	Clear	Magnetic Observatory.
Woodstock, Ontario			30.79	782.1	7.5	—13.6	88	Calm	0	0		0	0			0	0	Clear	J. Montgomery.
Sub-Series.																			
St. Johns, Newfoundland			30.22	767.6	19.0	— 7.2		Calm				Sm'e	10s			0	0	Fair	John Delany

Note.—The originals for Brockville, Charlottetown, Port Dover, Port Stanley, Stayner, St. Johns, N. F. and those telegraphed, give the amount of cloudiness by the scale 0 to 4. The elevation of Granton is 1,015 feet, or 309.4 m.; Stratford, 1,182 feet, or 360.3 m

UNITED STATES SERIES.

Furnished by the coöperation of Bvt. Brig. Gen. Albert J. Myer, Chief Signal Officer, U. S. Army.

STATIONS.	Barometer: Corrected for instrum'tal error and temperature. Inches.	Barometer: Corrected for instrum'tal error and temperature. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather	Observer.
Albany, N. Y.	.....	.....	30.35	770.9	10	—12.2	79	NW	40	17.9	.....	0	0	.....	.....	Inap.	Inap.	Clear	
Alpena, Mich.	.....	.....	30.88	784.3	— 5	—15.0	75	NW	5	2.2	.....	0	0	.....	.....	Inap.	Inap.	Clear	
Atlantic City, N. J.	.....	.....	30.41	772.4	21	— 6.1	58	W	16	7.2	.....	0	0	.....	.....	0	0	Clear	
Augusta, Ga.	.....	.....	30.34	770.6	48	8.9	63	E	7	3.1	.....	8cs	2s	NE	E	0	0	Cloudy	
Baltimore, Md.	.....	.....	30.54	775.7	25	— 3.9	75	NW	8	3.6	.....	0	Sm'e	.....	.....	Inap.	Inap.	Clear	
Barnegat, N. J.	.....	.....	30.37	771.4	22	— 5.6	66	NW	28	12.5	.....	0	0	.....	.....	Inap.	Inap.	Clear	
Bismarck, Dakota	28.36	720.3	30.14	765.5	15	— 9.4	82	NE	1	0.4	.....	0	0	.....	.....	0	0	Clear	
Boston, Mass.	.....	.....	30.03	762.7	17.5	— 8.1	67	N	25	11.2	.....	4cs	0	NW	.....	Inap.	Inap.	Fair	
Breckenridge, Minn.	.....	.....	30.44	773.2	14	—10.0	82	SE	24	10.7	.....	0	2s	.....	.....	0	0	Clear	
Buffalo, N. Y.	.....	.....	30.72	780.3	12	—11.1	61	NE	7	3.1	.....	0	0	.....	.....	Inap.	Inap.	Clear	
Burlington, Vt.	.....	.....	30.40	772.1	10	—12.2	58	N	8	3.6	.....	0	0	.....	.....	0	0	Clear	
Cairo, Ill.	.....	.....	30.47	773.9	35	1.7	52	NE	11	4.9	.....	.....	10s	.....	.....	0	0	Cloudy	
Cape Hatteras, N. C.	.....	.....	30.30	769.6	36	2.2	62	NE	28	12.5	.....	5ck	5s	W	NE	0	0	Cloudy	
Cape Henry, Va.	.....	.....	30.44	773.2	32	0.0	59	N	43	19.2	.....	0	0	.....	.....	0	0	Clear	
Cape Lookout, N. C.	.....	.....	30.38	771.6	37	2.8	67	NE	40	17.9	.....	5ck	5s	NE	.....	0	0	Cloudy	
Cape May, N. J.	.....	.....	30.44	773.2	24	— 4.4	74	NW	44	19.7	.....	0	0	.....	.....	0	0	Clear	
Charleston, S. C.	.....	.....	30.34	770.6	48	8.9	62	NE	13	5.8	.....	5cs	Haze	W	.....	0	0	Fair	
Cheyenne, Wyoming	24.12	612.6	30.06	763.5	31	— 0.6	59	N	16	7.2	.....	0	0	.....	.....	0	0	Clear	
Chicago, Ill.	.....	.....	30.70	779.8	27	— 2.8	77	E	11	4.9	.....	2c	0	.....	.....	0	0	Fair	
Cincinnati, Ohio	.....	.....	30.61	777.5	26	— 3.3	64	NE	7	3.1	.....	2c	0	W	.....	0	0	Fair	
Cleveland, Ohio	.....	.....	30.78	781.8	16	— 8.9	66	NE	4	1.8	.....	.....	Haze	.....	.....	Inap.	Inap.	Hazy	
Corsicana, Tex.	.....	.....	30.24	768.1	43	6.1	100	NW	10	4.5	.....	.....	10n	.....	.....	1.38	35.1	Light rain	
Davenport, Iowa	.....	.....	30.69	779.5	23	— 5.0	80	E	12	5.4	.....	8cs	0	.....	.....	0	0	Fair	
Denison, Tex.	.....	.....	30.30	769.6	42	5.6	100	NW	5	2.2	.....	.....	10n	.....	.....	1.46	37.1	Light rain	
Denver, Col.	24.92	633.0	30.14	765.5	24	— 4.4	74	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Detroit, Mich.	.....	.....	30.78	781.8	17	— 8.3	67	N	6	2.7	.....	0	0	.....	.....	0	0	Clear	
Dodge City, Kan.	27.73	704.3	30.22	767.6	21	— 6.1	85	N	4	1.8	.....	.....	10s	.....	.....	0.05	1.3	Cloudy	
Dubuque, Iowa	.....	.....	30.71	780.0	20	— 6.7	70	Calm	0	0	.....	5c	0	.....	.....	0	0	Fair	
Duluth, Minn.	.....	.....	30.66	778.7	18	— 7.8	68	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Eastport, Me.	.....	.....	29.54	750.3	20	— 6.7	100	NW	26	11.6	.....	.....	10n	.....	.....	0.20	5.1	Heavy snow	
Erie, Pa.	.....	.....	30.74	780.8	13	—10.6	62	N	4	1.8	.....	0	Haze	.....	.....	Inap.	Inap.	Clear	
Escanaba, Mich.	.....	.....	30.83	783.1	8	—13.3	67	N	8	3.6	.....	2c	0	NW	.....	0	0	Clear	
Fort Gibson, Indian Ter.	.....	.....	30.31	769.9	39	3.9	91	E	5	2.2	.....	.....	10n	.....	E	0.70	17.8	Light rain	
Ft. St. Michael, Alaska	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Fort Sill, Indian Ter.	29.12	739.6	30.31	769.9	29	— 1.7	48	N	13	5.8	.....	.....	10s	.....	.....	0	0	Cloudy	
Fort Sully, Dakota	28.46	722.9	30.24	768.1	21	— 6.1	85	SE	6	2.7	.....	0	0	.....	.....	0	0	Clear	
Florence, Arizona	28.07	728.2	30.21	767.3	55	12.8	.....	SW	.....	.....	.....	0	0	.....	.....	0	0	Clear	
Galveston, Tex.	.....	.....	30.13	765.3	54	12.2	93	N	.....	.....	.....	.....	10s	.....	N	0.77	19.6	Threatening	
Grand Haven, Mich.	.....	.....	30.78	781.8	14	—10.0	73	E	6	2.7	.....	0	0	.....	.....	Inap.	Inap.	Clear	
Indianapolis, Ind.	.....	.....	30.64	778.2	22	— 5.6	78	NE	8	3.6	.....	8cs	0	.....	.....	0	0	Fair	
Indianola, Tex.	.....	.....	30.34	770.6	47	8.3	85	NW	19	8.5	.....	.....	10s	.....	.....	0.15	3.8	Cloudy	
Jacksonville, Fla.	.....	.....	30.22	767.6	59	13.3	80	Calm	0	0	.....	8k	0	NW	.....	0	0	Cloudy	
Keokuk, Iowa	.....	.....	30.59	777.0	23	— 5.0	73	E	12	5.4	.....	0	5s	.....	E	0	0	Fair	
Key West, Fla.	.....	.....	30.09	764.3	63	17.2	83	NE	16	7.2	.....	0	0	.....	.....	0	0	Clear	
Kittyhawk, N. C.	.....	.....	30.44	773.2	33	0.6	69	N	40	17.9	.....	2c	2s	SW	N	0	0	Fair	
Knoxville, Tenn.	.....	.....	30.44	773.2	35	1.7	44	N	22	9.8	.....	8cs	0	.....	.....	0	0	Cloudy	
La Crosse, Wis.	.....	.....	30.69	779.5	20	— 6.7	70	SE	8	3.6	.....	Haze	Haz	.....	.....	0	0	Hazy	
Leavenworth, Kan.	.....	.....	30.49	774.4	29	— 1.7	89	E	6	2.7	.....	.....	10s	.....	.....	0.01	0.3	Cloudy	
Louisville, Ky.	.....	.....	30.60	777.2	26	— 3.3	63	NE	22	9.8	.....	5cs	0	NE	.....	0	0	Fair	
Lynchburg, Va.	.....	.....	30.58	776.7	32	0.0	41	N	3	1.3	.....	5c	0	W	.....	0	0	Fair	
Malone, N. Y.	.....	.....	30.53	775.4	1	—17.2	72	W	10	4.5	.....	0	0	.....	.....	0.50	12.7	Clear	
Marquette, Mich.	.....	.....	30.73	780.5	18	— 7.8	68	S	6	2.7	.....	8ck	0	.....	.....	0	0	Cloudy	
Memphis, Tenn.	.....	.....	30.39	771.9	39	3.9	63	NE	11	4.9	.....	.....	10n	.....	NW	Inap.	Inap.	Light rain	
Milwaukee, Wis.	.....	.....	30.77	781.5	26	— 3.9	63	E	12	5.4	.....	2c	0	.....	.....	0	0	Clear	
Mobile Ala.	.....	.....	30.22	767.6	55	12.8	74	N	7	3.1	.....	8c	2s	W	.....	0	0	Cloudy	
Montgomery, Ala.	.....	.....	30.26	768.6	54	12.2	64	NE	6	2.7	.....	10cs	Sm'e	W	.....	0	0	Cloudy	
Morgantown, W. Va.	29.54	750.3	30.73	780.5	16	— 8.9	66	N	6	2.7	.....	0	0	.....	.....	0.04	1.0	Clear	
Mt. Washington, N. H.	23.04	585.2	29.40	746.7	—15	—26.1	100	NW	120	53.6	.....	.....	Fog	.....	.....	0	0	Foggy	
Nashville, Tenn.	.....	.....	30.44	773.2	35	1.7	70	NE	6	2.7	.....	.....	10s	.....	.....	0	0	Cloudy	
New Haven, Conn.	.....	.....	30.22	767.6	18	— 7.8	60	NW	15	6.7	.....	Haze	0	.....	.....	Inap.	Inap.	Clear	
New London, Conn.	.....	.....	30.16	766.1	18	— 7.8	68	NW	21	9.4	.....	0	0	.....	.....	0.01	0.3	Clear	
New Orleans, La.	.....	.....	30.17	766.3	55	12.8	74	NE	10	4.5	.....	.....	10n	.....	.....	0.02	0.5	Light rain	
Newport, R. I.	.....	.....	30.10	764.5	19	— 7.2	67	NW	21	9.4	.....	0	0	.....	.....	0.01	0.3	Clear	
New York, N. Y.	.....	.....	30.35	770.9	19	— 7.2	61	NW	27	12.1	.....	0	0	.....	.....	Inap.	Inap.	Clear	
Norfolk, Va.	.....	.....	30.47	773.9	28	— 2.2	67	N	20	8.9	.....	0	2s	.....	.....	0	0	Fair	
North Platte, Neb.	27.29	693.2	30.06	763.5	19	— 7.2	84	SE	8	3.6	.....	0	2s	.....	.....	0	0	Clear	
Omaha, Neb.	29.32	744.7	30.49	774.4	25	— 3.9	75	SE	8	3.6	.....	Haze	8s	.....	SE	0	0	Cloudy	
Oswego, N. Y.	.....	.....	30.03	778.0	13	—10.6	74	N	16	7.2	.....	0	Haz.	.....	.....	0.06	1.5	Clear	
Pembina, Dakota	.....	.....	30.27	768.8	19	— 7.2	92	S	24	10.7	.....	.....	10s	.....	S	0	0	Cloudy	
Philadelphia, Pa.	.....	.....	30.47	773.9	21	— 6.1	29	NN	27	12.1	.....	0	0	.....	.....	Inap.	Inap.	Clear	
Pike's Peak, Col.	17.71	449.8	29.92	760.0	6	—13.9	64	NN	11	4.9	.....	0	0	.....	.....	0.06	1.5	Clear	
Pittsburgh, Pa.	.....	.....	30.71	780.0	16	— 8.9	74	N	5	2.2	.....	0	0	.....	.....	0.03	0.8	Clear	
Port Huron, Mich.	.....	.....	30.79	782.1	16	— 8.9	66	E	2	0.9	.....	0	5s	.....	N	Inap.	Inap.	Fair	
Portland, Me.	.....	.....	29.92	760.0	16	— 8.9	67	NW	20	8.9	.....	0	5s	.....	NW	0.01	0.3	Fair	
Portland, Oregon	.....	.....	30.28	769.1	45	7.2	76	Calm	0	0	.....	.....	10s	.....	.....	0.33	8.4	Cloudy	
Punta Rassa, Fla.	.....	.....	30.16	766.1	61.4	16.4	85	NE	9	4.0	.....	8ck	0	SW	.....	0	0	Fair	
Rochester, N. Y.	.....	.....	30.66	778.7	13	—10.6	72	N	12	5.4	.....	0	Haze	.....	.....	0.08	2.0	Clear	
Salt Lake City, Utah	25.88	657.3	30.21	767.3	27	— 2.8	77	SE	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Sandy Hook, N. J.	.....	.....	30.36	771.1	21	— 6.1	71	NW	38	17.0	.....	0	0	.....	.....	Inap.	Inap.	Clear	
San Diego, Cal.	.....	.....	30.24	768.1	49	9.4	85	NE	4	1.8	.....	0	0	.....	.....	0	0	Clear	
San Francisco, Cal.	.....	.....	30.32	770.1	50	10.0	96	N	6	2.7	.....	.....	Fog	.....	.....	0.50	12.7	Foggy	
Santa Fé, N. M.	23.36	593.3	29.90	759.4	23	— 5.0	100	N	12	5.4	.....	.....	Fog	.....	.....	0.05	1.5	Foggy	
Savannah, Ga.	.....	.....	30.27	768.8	49	9.4	71	NE	5	2.2	.....	10cs	Haze	SW	.....	0	0	Hazy	
Shreveport, La.	.....	.....	30.27	768.8	48	8.9	92	NE	8	3.6	.....	.....	10n	.....	.....	0.72	18.3	Light rain	
Smithville, N. C.	.....	.....	30.36	771.1	41	5.0	35	N	13	5.8	.....	8cs	0	W	.....	0	0	Cloudy	
Springfield, Mass.	.....	.....	30.20	767.1	20	— 6.7	39	NW	8	3.6	.....	0	0	.....	.....	Inap.	Inap.	Clear	
St. Louis, Mo.	.....	.....	30.55	776.0	29	— 1.7	89	NE	12	5.4	.....	.....	10s	.....	.....	0	0	Cloudy	
St. Marks, Fla.	.....	.....	30.22	767.6	53	11.7	86	Calm	0	0	.....	.....	10s	.....	NW	0	0	Cloudy	
St. Paul, Minn.	.....	.....	30.60	777.2	20	— 6.7	70	SE	12	5.4	.....	0	0	.....	.....	0	0	Cloudy	
St. Paul's Island, Alaska	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Thatcher's Island, Mass.	.....	.....	30.00	762.0	17	— 8.3	50	NW	40	17.9	.....	1k	0	NW	.....	0	0	Clear	
Toledo, Ohio	.....	.....	30.75	781.0	20	— 6.7	70	NE	7	3.1	.....	0	Haze	.....	.....	0	0	Clear	
Tucson, Arizona	27.05	702.3	30.30	769.6	32	0.0	.....	S	.....	.....	.....	0	0	.....	.....	0	0	Clear	
Tybee Island, Ga.	.....	.....	30.26	768.6	52	11.1	73	NE	12	5.4	.....	2c	2s	NE	N	0	0	Fair	
Vicksburg, Miss.	.....	.....	30.28	769.1	50	10.0	81	NE	7	3.1	.....	.....	10n,sm'	.....	NE	0.02	0.5	Light rain	
Virginia City, M. T.	24.39	619.5	29.87	758.7	22	— 5.6	58	Calm	0	0	.....	8k	0	W	.....	0	0	Cloudy	
Washington, D. C.	.....	.....	30.58	776.7	23	— 5.0	66	NW	13	5.8	.....	2cs	0	W	.....	0	0	Fair	
Wilmington, N. C.	.....	.....	30.39	771.9	40	4.4	31	N	15	6.7	.....	8cs	0	NW	.....	0	0	Fair	

UNITED STATES SERIES.—CONTINUED.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Wood's Holl, Mass.	.....	.....	30.06	763.5	21	— 6.1	57	NW	24	10.7	.....	0	0	.....	.....	0	0	Clear	
Yankton, Dakota	29.12	739.6	30.55	776.0	15	— 9.4	73	SE	7	3.1	.....	2cs	0	NW	.....	0	0	Fair	
Yuma, Arizona	.....	.....	30.25	768.3	62	11.1	.....	N	.....	.....	.....	0	0	.....	.....	0	0	Clear	
Sub-Series.																			
Kingston, Jamaica, W. I.	.....	.....	30.15	765.8	70	21.1	75	N	5	2.2	.....	2c	2s	.....	.....	0	0	.....	James Gall.
Navassa, W. I.	.....	.....	.....	.....	73	22.8	.....	N	.....	.....	3	.....	.....	.....	.....	0	0	.....	Dr. G. H. Davison.
Clifton, Ja., W. I.	27.12	688.8	29.96	761.0	57	13.9	81	N	1.0	0.4	.....	2c	0	N	.....	0	0	Fine	C. Partridge.
Paramaribo, D. Guiana, S.A.	.....	.....	30.02	762.5	81	27.2	78	E	.....	.....	2	3c	5k	E	.....	0	0	Fair	C. J. Hering.
Batavia, Dutch Guiana, S.A.	30.07	763.8	.....	.....	78.8	26	.....	E	.....	.....	.....	.....	.....	.....	.....	0.030	0.75	Cloudy	Dr. H. Groot.
Medellin, Colombia, S. A.	25.21	640.3	.....	.....	65.5	18.6	86	NW	.....	.....	1	.....	10n	.....	.....	Inap.	Inap.	Heavy rain.	Thomas Herran.
York Factory, B. A.	.....	.....	29.88	758.9	14.0	—10.0	91	S	20	8.9	.....	6k	0	S	.....	0.04	1.0	Gloomy	J. Fortescue, W. Wood
Honolulu, Oahu, H. I.	.....	.....	30.14	765.5	69	20.6	95	NE	.....	.....	2	.....	.....	.....	.....	0	0	.....	Daniel Smith.
Makawao, Maui, H. I.	.....	.....	30.00	762.0	62	16.7	71	Calm	.....	.....	0	0	0	.....	.....	0	0	.....	F. L. Clarke.

Note.—The originals give the amount of cloudiness by the scale 0 to 4, except York Factory, Makawao, Medellin and Paramaribo. The elevation of the barometer at Bismarck is 1,677 feet, or 511.1 meters; Cheyenne, 6,057.3 ft., or 1,846.2 m.; Clifton, about 2,592 ft., or 789.5 m.; Denver, 5,135 ft., or 1,565.2 m.; Dodge City, 2486ft., or 757.5 m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Florence, 1,550 (?) ft., or 472.5 (?) m.; Makawao, 2,705 ft., or 872.1 m.; Morgantown, 1,027.9 ft., or 313.3 m.; Medellin, 4,876 ft., or 1,486.2 m.; Mt. Washington, 6,285 ft., or 1,916.6 m.; North Platte, 2,846 ft., or 867.4 m.; Omaha, 1,054.6 ft., or 321.4 m.; Pike's Peak, 14,150.7 ft., or 4,313.1 m.; Salt Lake City, 4,362.2 ft., or 1,329.6 m.; Santa Fe, 6,862.2 (?) ft., or 2,091.6 (?) m.; Tucson, 2,545 (?) ft., or 775.7 (?) m.; Virginia City, 5,480 (?) ft., or 1,670.3 (?) m.; Yankton, 1,278 ft., or 389.5 m. The following constants are added in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Denver, 5.22 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fe, 6.54 in.; Tucson, 2.59 in.; Virginia City, 5.48 in. The elevation of Batavia is about 6 feet; the barometric readings need the addition of 0.2 mm. or 0.01 in. for reduction to sea-level.

UNITED STATES NAVAL SERIES.

By authority of the **SECRETARY OF THE NAVY.**

Furnished by the coöperation of the Navy Department, through Commodore Daniel Ammen, U. S. N., Chief of Bureau of Navigation.

STATIONS AND VESSELS.	TRUE COURSE TOWARD—	HOURLY RATE IN KNOTS.	*BAROMETER AS REPORTED.		TEMPERATURE OF THE AIR.		RELATIVE HUMIDITY.	WIND.			CLOUDS.				RAIN-FALL OR MELTED SNOW IN THE PAST 24 HOURS.		STATE OF OCEAN.	DIRECTION OF SWELL FROM—	WEATHER.	OBSERVER.
								Direction.	Velocity		Amount.		Direction.							
			Inches.	Millimeters.	Fahrenheit.	Centigrade.	Per cent.	From—	Miles per hour.	Meters per second.	Force. 0—10.	Up'er 0—10.	Low'r 0—10.	Up'er From—	Low'r From—	Inches.	Millimeters.				
Naval Academy, Annapolis, Md.			30.14	765.5	24	— 4.4		NW			6		1		S	0	0			Clear	
Naval Hospital, Annapolis, Md.			30.51	774.9	23	— 5.0	100	N			3		1		N	0	0			Clear	
Navy Yard, Mare Island, Cal.			30.37	771.4	51.5	10.8	96	ESE			2		8			0.099	2.51			Cloudy	
Navy Yard, Norfolk, Va.			30.64†	778.7†	30	— 1.1	89	NNW			6–7		2s							‡D. clouds	
Navy Yard, Pensacola, Fla.			30.30	769.6	59	15.0	91	N			1		9		SE	0	0			‡D. clouds	
Navy Yard, Portsmouth, N.H.			29.92	760.0	14	—10.0		WNW			6				S&E					Clear	
¶ Canonicus, New Orleans, La.			30.16	766.1	54	12.2	67	ENE			2		10							Drizzling	
Colorado, New York, N. Y.			30.33	770.4	21	— 6.1		NW			7		0			0.01	0.3			Blue sky	
Essex, Key West, Fla.			30.12	765.0	69	20.6		N			3		0							Blue sky	
Hartford, Hampton Roads, Va.			30.52	775.2	30	— 1.1		NNW			2		2		S	0	0			Pleasant	
Lackawanna, Mare Island, Cal.			30.20	767.1	56	13.3	87	N			1		10		S			Smooth		Foggy	
Marion, Port Said, Egypt.			30.11	764.8	65	18.3	89	SW			1		5		NW			Smooth		‡D. clouds.	
Michigan, Erie, Pa.			30.35	770.9	11	—11.7	80	N			1		2							Clear	
Monongahela, Baltimore, Md.			30.50	774.7	26	— 3.3		NNW			2–3		0							Hazy	
New Hampshire, Port Royal, S. C.			30.40	773.7	52	11.1		ENE			3		6		E			Smooth		‡D. clouds	
Omaha, Panama.			30.04	763.0	76	24.4	88	NNW			1		2		S	0	0	Smooth		Pleasant	
Osslpee, Pensacola, Fla.			30.27	768.8	59	15.0		NNE			3									Misty	
Pensacola, Panama.			30.02	762.5	78	25.6	86	NNW			1		2							Pleasant	
Plymouth, New Orleans, La.			30.29	769.4	59	15.0	76	NE			2		10							Rain & fog	
¶ Rio Bravo, Matamoras, Mex.			30.14	765.5	47	8.3	85	NW			1		2		W					‡D. clouds	
Santee, Annapolis, Md.			30.04†	763.0†	28	— 2.2		NW			6		1		S					Clear	
St. Louis, League Island, Pa.			30.20	769.4	22	— 5.6		NW	20	8.9			0			0	0			Clear	
Vandalia, Constantinople, Turkey.			29.75	755.6	58	14.4	94	SW			5		5		NE					‡D. clouds	
Wabash, Boston, Mass.			30.07	763.8	18	— 7.8		NW			5		0							Blue sky	
Wyoming, Washington, D.C.			30.77†	781.5†	24	— 4.4		NNW			2									Hazy	

* It is not known that the barometer is corrected for temperature, instrumental error or elevation. † Aneroid Barometer. ‡ Detached clouds. ¶ Barometer corrected for instrumental error and reduced to sea-level.

UNITED STATES MARINE SERIES

REPORTED TO THE OFFICE OF THE CHIEF SIGNAL OFFICER OF THE ARMY.

NAMES OF VESSELS.	True course toward—	Hourly rate in knots.	Barometer reduced to sea-level.		Temperature of the Air.		Relative Humidity.	Wind.				Clouds.				State of Ocean.	Direction of swell from—	Weather.	OBSERVER.
								Direction.	Velocity.		Force.	Amount.		Direction.					
												Up'er	Low'r	Upper.	Lower.				
			Inches.	Millimeters.	Fahrenheit.	Centigrade.	Per cent.	From—	Miles per hour.	Meters per second.	0—10.	0—10.	0—10.	From—	From—				
PACIFIC MAIL S. S. CO. MARINE SERIES. Furnished by the coöperation of ————, President; Williams, Blanchard & Co., Agents.																			
S. S. City of Peking																			Lt. Z. L. Tanner, U.S.N
OCCIDENTAL AND ORIENTAL S. S. CO. MARINE SERIES. Furnished by the coöperation of George H. Bradbury, President; T. H. Goodman, Agent.																			
S. S. Belgic																			Capt. John Metcalf.
S. S. Gaelic																			Capt. W. H. Kidley.
S. S. Oceanic																			Capt. H. Parsell.
NORTH GERMAN LLOYD OF BREMEN MARINE SERIES. Furnished by the coöperation of A. Schumacher & Co., Agents.																			
S. S. Baltimore																			Capt. H. Andressen.
S. S. Berlin																			Capt. C. Pohle.
S. S. Braunschweig																			Capt. K. Undütsch.
S. S. Nürnberg N. 40°, 45′, W. 52°, 17′	ENE ½E		30.22	767.6	38.8	3.8		NW			2–5					Swell	NE	Overcast	Capt. A. Jaeger. Capt. G. Meyer.
S. S. Ohio																			
MARINE SERIES. (Miscellaneous.) Furnished by the coöperation of the Observer named.																			
Schooner Addie Fuller, at Brunswick, Ga.			30.20	767.1	57	13.9	75	NE	6	2.7			10s		NE			Overcast	Capt. James Jorgensen

NOTE.—The schooner Addie Fuller gives the amount of cloudiness by the scale 0 to 4.

COLLATED AT THE OFFICE OF THE CHIEF SIGNAL OFFICER OF THE ARMY, WASHINGTON, D. C.

The records which appear in this Bulletin are copied from the regular exchanges of this office, made in each instance in compliance with an especial reques and are published for the uses of the coöperating observers. The barometric readings in the first two columns are reduced to freezing and their respective standards; those in the second two also to mean sea-level. The "weather" is generally published as given.

When the distinction between the upper and lower strata of clouds is not reported, the *kinds* or *types*, viz: cirrus, cumulus, stratus, nimbus, scud, fracto, pallio, haze, fog and smoke, as indicated, respectively, by the letters c, k, s, n, d, f, p, hz., fg. and sm'e, are generally published with the amount in the lower-cloud column. The distinction between the upper and lower strata is carefully made in the United States Series and a portion of the Canadian Series, and the types are indicated by the above letters or their combinations in the proper column.

Albert J. Myer

Brig. Gen. (Bvt. Assg'd.) Chief Signal Officer, U. S. A.

BULLETIN

OF

INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON FEBRUARY 14, 1877.

7:35 A. M. WASHINGTON mean time.

6:7 A. M. MEXICO mean time.
7:7 A. M. SAN JOSE mean time.
0:6 P. M. LISBON mean time.
0:28 P. M. MADRID mean time.
0:43 P. M. GREENWICH mean time.
0:53 P. M. PARIS mean time.
1:1 P. M. BRUSSELS mean time.
1:4 P. M. UTRECHT mean time.
1:13 P. M. BERNE mean time.
1:26 P. M. CHRISTIANIA mean time.
1:33 P. M. COPENHAGEN mean time.
1:33 P. M. ROME mean time.
1:37 P. M. BERLIN mean time.
1:49 P. M. VIENNA mean time.
1:55 P. M. STOCKHOLM mean time.
2:18 P. M. ATHENS mean time.
2:39 P. M. CONSTANTINOPLE mean time.
2:44 P. M. ST. PETERSBURG mean time.
6:36 P. M. CALCUTTA mean time.
10:2 P. M. TOKEI mean time.

ALGERIAN SERIES.

Furnished by the coöperation of General d'Eudeville, Commandant Supérieur du Génie in Algeria.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Nemours			30.23	767.9	64.4	18.0		SSE			2		1			0	0	Clear	Michel.
Algiers			30.23	767.8	63.7	17.6		WSW			1		1			0	0	Clear	Biscarrat.
La Calle			30.17	766.2	60.8	16.0		NNW			4		2			0	0	Clear	Fleury.
Tunis			30.16	766.1	64.6	18.1		NW			5		2			0	0	Clear	Jacques.
Sfax																			
Saida			30.23	767.9	66.4	19.1		S			2		1			0	0	Clear	Millot.
Tebessa			30.20	767.1	60.4	10.2		NNW			2		2			0	0	Clear	Bourgeois.
Geriville			30.22	767.6	49.1	9.5		NNW			3		2			0	0	Clear	Lemaillot.
Laghouat			30.21	767.3	64.6	18.1		N			1		1			0	0	Clear	Guyot.
Biskra			30.16	766.1	68.2	20.1		NW			3		4			0	0	Fair	Kuntz.

NOTE.—In the originals the distinction between the amount of upper and lower clouds is apparently not made. The weather is published as given. The rain-fall is measured at 7 a. m., local time.

AUSTRIAN SERIES.

Furnished by the cooperation of Professor Dr. Julius Hann, Director of the Imperial and Royal Central Meteorological Institute at Vienna.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Agram			30.07	763.7	40 8	4.9	61	NE			2		10			0	0		Prof. Ivan Stozir.
Cracow, I. R. Observatory			30.16	766.1	27.3	— 2.6	94	NE			1		1			0	0		Dr. Wierzbiski.
Eperies			30.06	763.5	26.6	— 3.0	57	Calm			0		0			0	0		Julius Mikolik.
Gratz	28.78	731 1	30.06	763.4	46.4	8.0	42	WNW			4		2			0	0		Andreas Rospini.
Hermannstadt	28.44	722.3	29.94	760 5	25.7	— 3.5	87	N			2		8			0.130	3.30		Prof. Reissenberger
Kremsmünster	28.74	730.0	30.13	765.3	38.1	3.4	87	W			2		10			0.472	12.0		Prof. C. Wagner.
Lemberg			30.03	762.7	19.4	— 7.0	92	NW			1		4			0	0		Dr. T. Stanecki.
Nyiregyhaza																			Habzsuda Daniel.
Pola			29.96	761.0	53.6	12.0	53	E			4		2cs			0	0		I.R.Hydrographic Office.
Szegedin			30.09	764.3	27.7	— 2.4	83	N			4		0			0.138	3 50		Karl Stancel.
Trieste			29.98	761.5	55.9	13.3	39	ESE			2		0			0	0	Clear	Prof. V. Farolfi.
Vienna			30.16	766.0	30.6	— 0.8	64	NW			2		10			0.417	10.6	Raining	I. R. Central Met. Obs'y.

NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 7 p. m., local time. The elevation of Gratz is 343.5 meters, or 1,126.9 feet; Hermannstadt, 407.8 meters, or 1,337.9 feet; Kremsmünster, 383.6 meters, or 1,258.5 feet.

BELGIAN SERIES.

Furnished by the coöperation of J. C. Houzeau, Director of the Royal Observatory at Brussels.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Arlon			30.15	765.7	43.3	6.3	94	WSW			2		10			0.276	7.0	Raining	Royal Observatory.
Brussels			30.05	763.2	48.0	8.9	88	SSW			1		10u		SW	0.055	1.40	Light rain	
Furnes			30.02	762.4	52.2	11.2	89	WSW			4		8			0.031	0.8		
Maeseyck			30.05	763.3	47.5	8.6	83	SW			2		10			0.020	0.5		

NOTE.—In the originals, the weather is occasionally given in general notes.

BRITISH SERIES

Furnished by the coöperation of Robert H. Scott, Esq., Director of the Meteorological Office, London, Alexander Buchan, Secretary of the Scottish Meteorological Society, Edinburgh, and the respective Observers.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Aberdeen			29.64	752.8	41.5	5.3		S	13	5.8			9			0.025	0.63	Misty	William Boswell.
Ardrossan			29.72	754.9	49	9.4		SW			4		8					Raining	William McNeil.
Armagh, Observatory			29.78	756.4	51.2	10.7		SSW	13	5.8			10					Raining	S. Call, for Dr. Robinson.
Bidston (Liverpool Obs.)			29.89	759.2	53.0	11.7		SW	23	10.3			9					Overcast	John Hartnup.
Birr Castle, (Parsonstown)			29.83	757.7	54.2	12.3		SW			2–3		10					*D. clouds	J. Dreyer.
Bradford			29.86	758.4	51.7	10.9		W			4		9			0.02	0.5	Blue sky	J. McLandsborough.
Bridgetown, (Barbados)			30.04	763.0	79.5	26.4		NE			3		7					*D. clouds	Sergt. J. F. Halanen, A.
Cambridge, Observatory			30.02	762.5	52.5	11.4		SSW			1		10					Overcast	H. Todd. [H. C.
Cardington			29.99	761.7	52.0	11.1		W			1		8					Overcast	John McLaren.
Carlisle																			T. Bell, for J. Cartmell.
Chatham, School M. E.			29.94	760.5	52.2	11.2		NW			2		8					Gloomy	Capt. Fellows, R. E.
Dartmoor	28.61	726.7	30.14	765.5	48.8	9.3		W			5		10					Foggy	R. E. Power.
Davos Platz, (Switzerland)	24.88	631.9			33.0	0.6	90	NE			1		10			0.61	15.6	Snowing	Francis Redford, M. A.
Donaghadee			29.78	756.4	51	10.6		SW			3		7					*D. clouds	J. Mac Gowan.
Dover			30.03	762.7	52	11.1		WSW			2		5					½ clouded	J. Costello.
Eccles, (near Manchester)			29.89	759.2	53.0	11.7		SW	4.2	1.9			10					Gloomy	Thomas Mackereth.
Falmouth, Observatory			30.10	764.5	54.8	12.7		WSW			4		9					Overcast	The Staff.
Fort Napier, (Natal)	27.57	700.3	29.81	757.2	84.0	28.9		NE			2		0					Blue sky	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.88	758.9	87	30.6		N			0		3					*D. clouds	
Galway, Queen's College			29.71	754.6	60	10.6		SW			6		10					Gloomy	Prof. A. H. Curtis.
Gibraltar, (Mediterranean)			30.23	767.8	68.9	20.5		W			3		0					Blue sky	Corpl. C. Aitken, A. H. C.
Glasgow, Observatory			29.69	754.1	50.9	10.5		SW			2		10					Threatening	Lewis Stuart.
Great Yarmouth			29.94	760.5	51	10.6		W			2		6					Rain & fog	G. T. Watson.
Greenwich, Royal Obs'y			30.04	763.0	52.3	11.3		WSW			1		10			Blank	Blank	Overcast	The Staff, for G. B. Airy.
Guernsey			30.13	765.3	53	11.7		SW			2		7					*D. clouds	Dr. S. E. Hoskins.
Helston			30.09	764 3	54	12.2		SW			6		4k			0	0	Fine	M. P. Moyle.
Holyhead			29.89	759.2	52	11.1		SW			5		5					Misty	John Tilston.
Kew, Observatory			30.04	763.0	52.8	11.6		W	6	2.7			10k					Threatening	The Staff.
Kingstown			29.86	758.4	55	12.8		SW			4		10					Overcast	George Mitchell.
Leicester Museum			29.94	760.5	53.5	11.9		W			3		5					*D. clouds	Wm. J. Harrison, F.G.S.
Malta, (Mediterranean)			29.85	758.2	58.8	14.9		NW			3		8					Overcast	Corp'l. P. Bravis, A. H. C.
Nairn			29.56	750.8	48	8.9		SW			1		5					½ clouded	W. D. Penny.
Nassau, (Bahamas)			30.14	765.5	73.0	22.8		NE			2		4					*D. clouds	Surg. Maj. Henry.
Nottingham, Observatory			29.94	760.5	55.7	13.2		W			3		6k		WNW	0.07	1.78	*D. clouds	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			29.96	761.0	52.5	11.4		WSW			4		9					*D. clouds	Rev. Stephen Whitty.
Oxford, Radcliffe Obs'y			30.00	762.0	54	12.2		WSW			1		10					Overcast	J. Lucas.
Plymouth			30.09	764.3	54.5	12.5		W			3		10					Overcast	John Merrifield.
Roche's Point			29.92	760.0	53	11.7		WSW			3		10					Overcast	W. Kennedy.
Saint Ann's Head			29.99	761.7	52	11.1		SW			3		6					Misty	John C. Walker.
Saint Helier, (Jersey)			30.16	766.1	53.0	11.7		WSW			3		8					¾ clouded	A. P. Amy.
Sandwick Manse, (Orkneys)			29.53	750.0	42.2	5.7		S	22	9.8			10					Drizzling	Rev. C. Clouston, LL. D.
Scarborough																			F. Shaw.
Scutari Cemetery, (Turkey)			29.79	756.7	45.0	7.2		NE			1		10			Blank	Blank	Gloomy	Sergt. W. H. Lyne.
Sheffield			29.90	759.4	54.0	12.2		W			3		6			0	0	Overcast	W. F. Cooper.
Silloth Rectory			29.77	756.1	52.2	11.2	84	SW			6		6			0	0	*D. clouds	Rev. Francis Redford
Stonyhurst, Observatory			29.88	758.9	49.4	9.7		SW			3		10					Drizzling	Rev. S. J. Perry.
Stornoway, Lews C., (Hebr.)			29.49	749.0	41	5.0		WSW			5		8					Threatening	John Smith.
Stratfield Turgiss			30.04	763.0	53.1	11.7		W			1		10					Overcast	Rev. Charles H. Griffith.
Thurso			29.51	749.5	41	5.0		S			2		8					Raining	John Trotter.
Truro, Royal Institution			30.06	763.5	57	13.9		W			6		6					*D. clouds	W. Newcombe.
Valencia, Observatory			29.84	757.9	53.7	12.1		SSW	42	18.8			10					Squally	The Staff.
SUB-SERIES.																			
Calf of Man, (Isle of Man)																			Henry Mercer.
Cape Good Hope, Obs'y			29.99	761.7	85.6	29.8	47	WNW	7	3.1		1	4						The Staff, for E. J. Stone.
Hobart Town, (Tasmania)			29.84	757.9	72.0	22.2	88	S			1		0			0	0		Francis Abbott, F. R. A. S.
Leith, Restalrig Park			29.69	754.1	53.1	11.7		W			5		10k			0.12	3.0	Cloudy	Andrew Gibb.
Mauritius, Observatory			29.78	756.4	81.0	27.2	68	WSW	17.1	7.6						0.07	1.8		C. Meldrum.
Melbourne, Observatory			29.98	761.5	67.3	19.6	95	E	12	5.4			10			0.33	8.4	Thunder-storm	R. L. J. Ellery.
Monach L't-house, (Hebrides)																			J. Youngclause.
North Unst, (Shetland Is.)			29.41	747.0	41	5.0		SW			4		7						Robert Burnet.

NOTE.—Generally, the originals do not give the relative humidity, rain-fall, or distinction between upper and lower clouds. The originals give the wind direction to 32 points and weather by the Beaufort notation. The originals give the barometer for Aberdeen, Cardington, Freetown, Galway, Oxford, St. Helier, Sandwick, Scarborough, Stonyhurst, Leith, Monach and North Unst as read off and the amount of cloudiness for Stornoway by the scale 0 to 4. The wind-force is given by the scale 0 to 12 in the official series; 0 to 6 in the sub-series; except in lbs. per square foot for Greenwich and Hobart Town. The rain-fall is measured at Aberdeen at 10 h. m.; Bradford, 9 a. m.; Holyhead Town, 7:30 a. m.; Nottingham, 6 p. m.; Mauritius, 9 a. m., local time. The elevation of Dartmoor is 1,400 feet, or 426.7 meters; Davos Platz, 5,105? feet, or 1,556.0? meters; Fort Napier, 2,210 feet, or 670.6 meters. *Detached clouds.

By authority of the
MINISTER OF FOREIGN AFFAIRS.

COSTA RICA SERIES.

Furnished by the coöperation of Senor Federico Maison, Director of the Central Office of Statistics and Meteorology.

San José																			

DANISH SERIES.

Furnished by the coöperation of Captain N. Hoffmeyer, Director of the Royal Danish Meteorological Institute at Copenhagen.

Copenhagen			30.06	763.4	29.5	— 1.4	82	SSE			4		10					Snowing	
Fanöe			29.95	760.6	37.8	3.2	98	SW			4		9						
Godthaab, (Greenland)			30.03	762.8	0.0	—17.8	95	N			4		8						
Stykkisholm, (Iceland)			29.27	743.5	23.5	— 4.7	95	E			4		8						
Thorshavn, (Faröe)			29.41	746.9	41.0	5.0	76	SSE			4		10						
Vestervig			29.88	758.9	33.1	0.6	100	S			2		10						

NOTE.—The originals give the wind-force by the scale 0 to 6; occasionally, weather by Vienna symbols; no distinction between the amount of upper and lower clouds.

FRENCH SERIES.

Furnished by the co operation of His Excellency, U. J. Le Verrier, Director of the Paris Observatory, and the respective Observers.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Alençon	.....	.....	30.24	768.0	51.8	11	76	W	.....	.....	3	.....	8ck	.....	W	0	0	Very cloudy	Normal School.
Amiens	.....	.....	30.08	763.9	56.8	13.8	80	W	.....	.....	3	.....	5	.....	W	0.504	12.8	Cloudy	Normal School.
Avignon	.....	.....	30.13	765.3	59.7	15.4	55	N	.....	.....	4	.....	10	.....	.....	0	0	Lightly cov.	Normal School.
Bar-sur-Seine	.....	.....	30.18	766.6	50.5	10.3	93	SW	.....	.....	3	.....	10	.....	NW	0.524	13.3	Raining	C. Saillard.
Beaumette, (near Angers)	.....	.....	30.15	765.9	55.8	13.2	59	WSW	4.3	1.9	.....	.....	.....	.....	W	0	0	.....	Beaumette Observ'tory.
Beauvais	.....	.....	30.16	766.0	53.4	11.9	65	WNW	.....	.....	3	.....	10	.....	WNW	0.295	7.50	Covered	Normal School.
Besançon	.....	.....	30.21	767.4	49.5	9.7	93	SSW	.....	.....	3	.....	8	.....	SW	1.555	39.5	Very cloudy	Normal School.
Bourg en Bresse	.....	.....	30.36	771.2	47.7	8.7	97	N	.....	.....	2	.....	10n	.....	.....	0.150	3.8	Raining	Normal School.
Bourges	.....	.....	30.25	768.4	51.4	10.8	86	WSW	.....	.....	2	.....	5	.....	SW	0.004	0.1	Cloudy	Normal School.
Brest	.....	.....	30.12	765.0	57.4	14.1	84	SW	.....	.....	2	.....	9	.....	SW	0.010	0.25	.....	Naval Observatory.
Carcassonne	.....	.....	30.10	766.7	58.6	14.8	56	NW	.....	.....	2	.....	2	.....	E	0	0	Slightly cl'dy	Normal School.
Caen	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Chartres	.....	.....	30.10	764.5	53.8	12.1	90	W	.....	.....	2	.....	10	.....	E	0	0	Covered	Normal School.
Châlons-sur-Marne	.....	.....	30.14	765.5	52.5	11.4	95	NW	.....	.....	3	.....	10n	.....	SE	0.283	7.2	Covered	Normal School.
Clermont	.....	.....	30.24	768.2	55.4	13.0	53	W	.....	.....	1	.....	5	.....	.....	0	0	.....	Puy de Dome Obs'y.
Commercy	.....	.....	30.19	766.7	46.2	7.9	92	SE	.....	.....	2	.....	10	.....	.....	0.532	13.5	Covered	Normal School.
Commune de Gréasque*	.....	.....	30.01	762.2	58.5	14.7	48	NW	.....	.....	6	.....	5	.....	NW	0	0	.....	M. Kina.
Grenoble	.....	.....	30.21	767.3	51.3	10.7	85	NW	.....	.....	2	.....	5kn	.....	SE	0.110	2.8	Cloudy	Normal School.
La Roche-sur-Yon	.....	.....	30.24	768.1	56.5	13.6	71	W	.....	.....	1	.....	2	.....	NE	0.236	6.0	Slightly cl'dy	Normal School.
Le Mans	.....	.....	30.21	767.4	54.1	12.3	74	W	.....	.....	2	.....	8	.....	W	0	0	Very cloudy	Normal School.
Lons-Le-Saulnier	.....	.....	30.24	768.2	48.7	9.3	96	S	.....	.....	2	.....	10	.....	.....	0.047	1.20	Raining	Normal School.
Lorient	.....	.....	30.23	767.7	58.6	14.8	70	SW	.....	.....	1	.....	5	.....	W	0	0	Cloudy	Naval Observatory.
Mâcon	.....	.....	30.32	770.0	49.6	9.8	93	SW	.....	.....	4	.....	10	.....	.....	0	0	Covered	Normal School.
Metz	.....	.....	30.21	767.3	44.4	6.9	85	NE	.....	.....	3	.....	10	.....	.....	0.657	16.7	Covered	M. Schuster.
Mirecourt	.....	.....	30.11	764.9	50.2	10.1	59	NW	.....	.....	1	.....	10	.....	SE	0.08	2.	Covered	Normal School.
Nismes	.....	.....	30.07	763.8	64.0	17.8	56	NW	.....	.....	4	.....	..en	.....	SW	0	0	.....	Normal School.
Orleans	.....	.....	30.19	766.9	53.2	11.8	80	NW	.....	.....	2	.....	10	.....	NW	0	0	Covered	Normal School.
Paris, Observatory	.....	.....	30.17	766.4	53.8	12.1	75	W	.....	.....	3	.....	10k	.....	W	0.011	0.28	Covered	National Observatory.
Parthenay	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Privas	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Rochefort, Observatory	.....	.....	30.19	766.7	55.0	12.8	57	N	.....	.....	2	.....	5	.....	N	0	0	Cloudy	Normal School.
Rouen	.....	.....	30.26	768.5	57.2	14.0	74	SW	.....	.....	2	.....	10	.....	NE	0	0	Covered	Naval Observatory.
Saint Lo	.....	.....	30.16	766.0	55.4	13.0	69	W	.....	.....	2	.....	10	.....	W	0.311	7.9	Covered	Normal School.
Tarbes	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Villefranche	29.26	743.3	30.35	770.8	58.6	14.8	52	WNW	.....	.....	2	.....	2	.....	E	0	0	Slightly cl'dy	Normal School.
	.....	.....	30.26	768.5	52.2	11.2	81	NW	.....	.....	2	.....	10	.....	.....	0.024	0.6	Covered	Normal School.
SUB-SERIES.																			
Fort de France, Martinique	.....	.....	29.93	760.1	77.0	25	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	L'Abbé Marchési.
Marseilles	.....	.....	29.97	761.3	61.0	16.1	53	NW	.....	.....	6	.....	8	.....	.....	0	0	Cloudy	Marseilles Observatory.
Mont-Louis	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	—. Falguère.
Montsouris, Paris	25.02	635.6	30.34	770.6	55.4	13.0	3	NNE	7.4	3.33	.....	.....	2	.....	SSW	0	0	.....	Montsouris Observatory
Perpignan	.....	.....	30.16	766.1	53.2	11.8	70	WNW	.....	.....	2	.....	10	.....	WNW	0.012	0.3	.....	Dr. Fines.
Pic du Midi, (Summit,) H. P.	.....	.....	30.15	765.8	63.7	17.6	46	N	22.4	10.00	.....	.....	0	.....	.....	0	0	.....	M. Baylac.
Pic du Midi, (Plantade,) H. P.	22.64	575.0	.....	.....	43.5	6.4	.....	NE	.....	.....	1	.....	6	.....	.....	0	0	Fair	General de Nansouty.
Saint Maur, (near Paris)	.....	.....	30.17	766.2	53.6	12.0	70	WNW	.....	.....	2	.....	10	.....	.....	0	0	Covered	E. Renou.
Toulouse	.....	.....	30.30	769.5	54.5	12.5	61	NNW	.....	.....	1	.....	3	.....	.....	0	0	.....	Toulouse Observatory.
Tours	.....	.....	30.22	767.6	54.9	12.7	70	W	.....	.....	1	.....	9	.....	WNW	0.008	0.2	.....	C. Marquet.
Versailles, (near Paris)	.....	.....	30.17	766.3	54.0	12.2	70	WNW	.....	.....	3	.....	10	.....	.....	0.030	0 77	Covered	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai)	.....	.....	30.60	777.2	28.4	— 2.0	68	NW	7.4	3.3	.....	.....	0	.....	.....	0	0	.....	Mare Dechevrens, S. J.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—Generally, the originals give the wind-force by the scale 0 to 7; no distinction between upper and lower clouds, and, in the official series, the amount by the scale 0 to 4 the rain-fall as measured at 7, 8 or 9 a. m., local time; at Clermont, 9 a. m. of the following day; the weather in general terms as published. The elevation of Clermont is 388 meters, or 1,272.9 feet; Commune de Gréasque, 322 meters, or 1,056.4 feet; Tarbes, 308 meters, or 1,010 feet; Mont-Louis, 1,586.40 meters, or 5,204.8 feet; Pic du Midi, (Summit,) 2,877 meters, or 9,439.1 feet; Pic du Midi, Plantade,) 2,366 meters, or 7,762.6 feet. In correcting the Mont-Louis barometric observations for altitude, the constant 135. millimeters has been added. * Bouches-du-Rhône

GERMAN SERIES.

Furnished by the coöperation of Professor Dr. G. Neumayer, Director of the German Naval Observatory, Hamburg.

Bamberg	.....	.....	30.10	764.5	45.1	7.3	91	NW	.....	.....	3	.....	7	NW	.....	0.079	2.0	.....	Prof. T. Hoh.
Berlin	.....	.....	30.15	765.8	32.9	0.5	76	SE	.....	.....	1	.....	10	.....	.....	0	0	.....	Prof. Arndt.
Breslau	.....	.....	30.16	766.5	21.2	— 6.0	94	ESE	.....	.....	2	.....	0	.....	.....	0.413	10.5	.....	Royal University Obs'y.
Carlsruhe	.....	.....	30.14	765.5	48.0	8.9	74	SW	.....	.....	2	.....	10	.....	.....	0.996	25.3	.....	A. Senz.
Cassel	.....	.....	30.10	764.6	46.8	8.2	93	WSW	.....	.....	2	.....	8	W	.....	0.201	5.1	.....	Dr. H. Möhl.
Crefeld	.....	.....	30.06	763.4	49.6	9.8	71	SW	.....	.....	2	.....	9	.....	.....	0.04	1.	Raining	Director Lose.
Emden	.....	.....	30.13	765.2	44.2	6.8	94	SW	.....	.....	2	.....	10	.....	.....	0.461	11.7	.....	Prof. Prestel.
Frankfort on the Main	.....	.....	30.19	766.8	50.5	10.3	93	SW	.....	.....	2	.....	7	.....	.....	0.020	0.5	.....	Physical Society.
Friedrichshafen	28.74	729.9	30.21	767.3	44.6	7.0	87	WSW	.....	.....	2	.....	10	.....	.....	0.220	5.6	Raining	M. Wilhelm.
Hamburg	.....	.....	30.04	763.1	37.9	3.3	93	SSE	.....	.....	1	.....	3k	.....	.....	0.043	1.1	Clear	Captain F. Hegemann.
Kiel	.....	.....	30.01	762.2	36.3	2.4	91	SSW	.....	.....	2	.....	10	.....	.....	0.047	1.2	.....	Prof. G. Karsten.
Königsberg, (Prussia)	.....	.....	30.17	766.2	12.9	—10.6	83	N	.....	.....	2	.....	2	.....	.....	0.098	2.5	Snowing	Prof. E. Luther.
Koslin	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	10	.....	.....	0	0	.....	H. Müller.
Leipsic	.....	.....	30.18	766.5	29.1	— 1.6	.....	.....	.....	.....	.....	.....	10	.....	.....	0.142	3.6	Rain & fog	Prof. Bruhns.
Memel	.....	.....	30.11	764.8	38.1	3.4	95	SW	.....	.....	1	.....	0	.....	.....	0.024	0.6	.....	Reinbrecht & Skalweit.
Münster	.....	.....	30.17	766.3	7.3	—13.7	63	NE	.....	.....	2	.....	3	.....	.....	0.035	0.9	.....	Prof. E. Heis.
Neufahrwasser	.....	.....	29.91	759.6	46.0	7.8	82	SW	.....	.....	2	.....	9	WNW	.....	0	0	.....	A Lothe.
Posen	.....	.....	30.16	766.1	25.9	— 3.4	63	NE	.....	.....	2	.....	7	.....	.....	0	0	.....	Dr. Magener.
Strassburg, (in Alsace)	.....	.....	30.15	765.9	31.1	— 0.5	74	W	.....	.....	2	.....	10	.....	.....	0.831	21.1	.....	Dr. Schur.
Stuttgart	.....	.....	30.17	766.2	48.6	9.2	80	SW	.....	.....	2	.....	9	.....	.....	0.024	0.6	Raining	Prof. Schoder.
Thorn	.....	.....	30.14	765.5	46.9	8.3	69	W	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	Dr. Hasenbalg.
Treves, (Trier)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Prof. Flesch.
Weissemburg, (Bavaria)	.....	.....	30.02	762.5	47.3	8.5	76	SW	.....	.....	4	.....	10	.....	.....	0.008	0.2	Foggy	Dr. von Bebber.
Wustrow, Naval School	28.59	726.1	30.13	765.4	42.4	5.8	72	W	.....	.....	1	.....	9	NW	.....	0.409	10.4	.....	E. F. Schütz.
GERMAN NAVAL SERIES.	.....	.....	30.14	765.6	29.7	— 1.3	80	SE	.....	.....	3	.....	10	.....	.....	0	0	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—The elevation of Friedrichshafen is 413.4 meters, or 1,356.3 feet; Weissenburg, 431 meters, or 1,414.4 ft. In the originals the distinction between the amount of upper and lower clouds is not made. It is not always certain that the remarks in the weather column refer to the moment of observation.

GREEK SERIES.

Furnished by the coöperation of Professor Dr. J. F. Julius Schmidt, Director of the Royal Observatory at Athens.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Athens	.....	.....	29.70	754 4	60 8	16 0	.....	W	.....	.....	.....	.....	.....	.....	.....	.....	.....	Cloudy	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

Note.—The originals give the barometer corrected, but not reduced to sea-level; occasionally the kind of clouds; the weather as published. They omit the humidity, wind-force, amount of cloudiness and rain-fall.

INDIAN SERIES.

Furnished by the coöperation of H. F. Blanford, Meteorological Reporter to the Government of India.

Kurrachee	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Deesa	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Bombay	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Poona	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Lahore	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Belgaum	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Bangalore	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Rorkee	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Agra	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Trichinopoly	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Nagpur	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Madras	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Lucknow	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Allahabad	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Patna	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Hazaribagh	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Cuttack	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Calcutta (Alipore)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Goalpara	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Chittagong	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Sibsagar	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Rangoon	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Jubbulpore	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
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ITALIAN SERIES.

Furnished by the cooperation of His Excellency the Minister of Agriculture, Industry and Commerce, and the respective Observers.

Udine	.....	.....	29.92	760.0	58.3	14.6	13	NE	11.5	5.3	.....	.....	2	.....	.....	0	0	.....	Prof. Giovanni Clodig
Stelvio	22 09	561.1	.....	.....	27.7	— 2.4	.....	S	.....	.....	1	.....	10	.....	.....	2.16f	55.0	Heavy snow	Signora Ernesta Manfredi.
Valdobbia	22.17	563 1	.....	.....	32.5	0.3	100	WSW	.....	.....	4	.....	10	.....	.....	Inap.	Inap.	Snowing	Ab. Dom. Mongini.
Padua	.....	.....	29.95	760.6	55.2	12.9	49	SE	14.3	6.4	.....	.....	4	NW	.....	0	0	.....	Prof. Dott. Lorenzoni.
Vicenza	.....	.....	29.95	760.8	56.7	13.7	53	SE	4.5	2.2	.....	.....	2	W	.....	0	0	.....	Conte Alm. Da Schio.
Verona	.....	.....	29.93	760.2	56.7	13.7	72	E	.....	.....	1	.....	0	.....	.....	0	0	.....	Dott. B. Bertoncelli.
Bergamo	28.63	727.1	29.97	761.3	57.2	14.0	37	SE	.....	.....	4	.....	3	.....	.....	0	0	.....	Prof Trionfini Carlo.
Domodossola	.....	.....	29.92	760.0	62.8	17.1	40	N	.....	.....	6	.....	8	.....	.....	0.051	1.3	Raining	Prof. of. Giuseppe Ceriza
Milan	.....	.....	29.93	760.1	57.7	14.3	43	E	.....	.....	4	.....	2	NW	.....	0	0	.....	Ab. Gio. Capelli
Pavia	.....	.....	29.92	760.0	53.6	12.0	65	NE	.....	.....	6	.....	3	.....	.....	0	0	.....	Prof. Gio. Cantoni.
Moncalieri	.....	.....	29.92	759.9	62.4	16.9	59	ESE	6.4	3.1	.....	.....	5	S	.....	0	0	.....	Prof. P. F. Denza.
Mondovi	28.00	711.2	29.95	760.6	65.3	18.7	31	N	.....	.....	4	.....	6	WNW	.....	0	0	.....	Prof. D. C. Bruno.
Porto Maurizio	.....	.....	29.94	760.4	56.1	13.4	85	E	.....	.....	4	.....	7	.....	.....	0	0	.....	Prof. . Vassallo.
Genoa	.....	.....	29.89	759.3	58.6	14.8	70	SW	1.5	0.6	.....	.....	2	.....	.....	0	0	.....	Prof. G M Garibaldi.
Piacenza	.....	.....	29.95	760.7	54.0	12.2	63	E	7.4	3.3	.....	.....	3	.....	.....	0	0	.....	Dott. G. anzi.
Parma	.....	.....	29.85	758.2	56.7	13.7	67	SE	.....	.....	2	.....	1	.....	.....	0	0	.....	Prof. P. Pigorini.
Florence	.....	.....	29.94	760.4	62.6	17.0	52	E	.....	.....	2	.....	3	.....	.....	0	0	.....	Cav. F. Meucci.
Leghorn	.....	.....	29.91	759.6	60.3	15.7	75	ENE	4.5	1.9	.....	.....	9	.....	.....	0	0	.....	Prof. P. Monte.
Siena	28.71	729.3	29.94	760.4	57.6	14.2	68	NNW	1.8	0.6	.....	.....	5	N	.....	0	0	.....	Prof. L. Toscani.
Urbino	28.40	721.4	29.99	761.8	48.4	8.9	74	NE	.....	.....	2	.....	10	.....	.....	0	0	.....	Prof. P. Serpieri.
Pesaro	.....	.....	30.00	762.0	50.2	10.1	73	NW	6.3	2.8	.....	.....	10	NW	.....	0	0	.....	Prof. Luigi Guidi.
Ancona	.....	.....	30.03	762.8	49.6	9.8	72	NW	.....	.....	4	.....	3	.....	.....	0	0	.....	Prof. F. De— Bosis.
Grosseto	.....	.....	29.91	759.7	64.4	17.8	55	NNE	.....	.....	4	.....	4	SE	.....	0	0	.....	Avv. P. Ponticelli.
Rome	.....	.....	29.86	758.2	64.4	18.0	50	NW	13.7	6.1	.....	.....	2	.....	.....	0	0	.....	Prof's. P. Secchi & L. Respighi.
Naples, O. U	.....	..	29.84	758.0	63.3	17.4	67	SW	.....	.....	2	.....	8	NE	.....	0	0	.....	Prof. L. Palmieri.
Lecce	.....	.....	29.74	755.4	61.2	16.2	60	N	15.0	6.7	.....	.....	9	.....	.....	0	0	.....	Prof. C. De—Giorgi.
Cosenza	.....	.....	29.85	758.3	59.9	15.5	66	NW	4.9	2.2	.....	.....	6	.....	.....	0	0	.....	Prof. F. D. Conti.
Cagliari	.....		29.90	759.5	63.5	17.5	43	N	.....	.....	6	.....	3	W	.....	0	0	.....	Prof. A. Pacinotti.
Ilposto, (Sicily)	.....	.....	29.75	755.6	64.0	17.8	68	SE	.....	.....	2	.....	10	.....	.....	0	0	.....	Prof. F. Cafiero.
Palermo	.....	.....	29.85	758.1	63.3	17.4	60	WSW	9.4	4.2	.....	.....	4	.....	.....	0	0	.....	Prof. G. Cacciatore.
Caltanissetta	27.86	707.7	29.85	758 1	64.1	12.3	54	WNW	.....	.....	6	.....	3	S	.....	0	0	.....	Prof. A. Pagani.
Siracusa	.....	.....	29.84	758.0	62.6	17.0	76	E	.....	.....	1	.....	9	W	.....	0	0	.....	Prof. V. Giuliano.
Sub-Series.																			
Naples, S. R.	.....	.....	29.89	759.1	60.4	15.8	67	WSW	0	0	.....	.....	8	SW	.....	0	0	.....	Prof. F. Brioschi
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

Note.—The originals give the wind-force by the scale 0 to 4, or the velocity in kilometers per hour; generally, no distinction between upper and lower clouds occasionally the weather by the Vienna symbols. The elevation of Stelvio is 2,543.0 meters, or 8,342.9 feet; Valdobbia, 2,548.0 meters or 8,359.3 feet; Bergamo, 379.6 meters, or 1,24 3 feet; Monte dovi, 556 meters, or 1,824.2 feet; Siena, 348.7 meters, or 1,143.3 feet; Urbino, 461 meters, or 1,479.7 feet; Caltanissetta, 576.3 meters, or 1,871.0 feet.

JAPANESE SERIES.

Furnished by the coöperation of the Imperial University of Tokei, Japan.

Tokei	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Prof. P. V. Veeder.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

Note.—The originals give the amount of cloudiness by the scale 0 to 4 without distinguishing between upper and lower clouds. The rain-fall is measured at 7 a. m., cal time.

By authority of the SECRETARY OF PUBLIC WORKS.

MEXICAN SERIES.

Furnished by the coöperation of Senor Mariano Barcena, Director of the Central Meteorological Observatory in the City of Mexico.

STATIONS.	BAROMETER. Corrected for instrum'tal error and temperature. Inches.	BAROMETER. Corrected for instrum'tal error and temperature. Millimeters.	BAROMETER. Reduced to sea-level. Inches.	BAROMETER. Reduced to sea-level. Millimeters.	TEMPERATURE OF THE AIR. Fahrenheit.	TEMPERATURE OF THE AIR. Centigrade.	RELATIVE HUMIDITY. Per cent.	WIND. Direction. From—	WIND. Velocity. Miles per hour.	WIND. Velocity. Meters per second.	WIND. Force. 0—10.	CLOUDS. Amount. Up'er 0—10.	CLOUDS. Amount. Low'r 0—10.	CLOUDS. Direction. Upper. From—	CLOUDS. Direction. Lower. From—	RAIN-FALL OR MELTED SNOW IN THE PAST 24 HOURS. Inches.	RAIN-FALL OR MELTED SNOW IN THE PAST 24 HOURS. Millimeters.	WEATHER.	OBSERVER.
Mexico																			Mariano Barcena. Vicente Reyes. Miguel Perez. (Engineers in charge.)

NOTE.—The elevation of Mexico is 2,290 meters, or 7,512.9 feet. The rain-fall is measured at 6 a. m., local time.

NETHERLANDS' SERIES.

Furnished by the cooperation of Professor Buys Ballot, Director of the Royal Meteorological Institute of the Netherlands at Utrecht.

Flushing			30.04	763.1	46.4	8.0		SSW			4					0.047	1.2		
Groningen			29.96	760.9	45.7	7.6										0	0		
Helder			29.98	761.4	46.0	7.8		SW			4					0.024	0.6		
Utrecht			30.00	762.0	45.9	7.7	88	SSW			3		10			0.048	1.1	Overcast.	

NOTE.—The originals give the wind-pressure in kilograms per square meter; for Utrecht, they give the weather as published, from which the amount of cloudiness is taken by the scale 0 to 4, without distinguishing between upper and lower clouds. It is assumed that the barometer readings have been reduced to sea-level.

NORWEGIAN SERIES.

Furnished by the cooperation of Professor H. Mohn, Director of the Royal Norwegian Meteorological Institute at Christiania.

Bergen			29.78	756.5	36.0	2.2	82	SSE	13.7	6.1			10			0	0		
Brönö			29.68	753.8	30.2	— 1.0	54	SSE	6.7	3			10			0	0		
Christiania			29.97	761.2	18.0	— 7.8	80	SE	0	0			10					Light snow.	
Tromsö			29.62	752.4	22.6	— 5.2	74	SW	4.7	2			5			0	0		

NOTE.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols. The cloudiness and weather at Bergen refer to 2h., p. m., local time, instead of 1h., 4 min.

PORTUGUESE SERIES.

Furnished by the cooperation of J. C. de Brito Capello, Director of the Meteorological Observatory of the Infante Don Luiz at Lisbon.

Angra, (Azores)			30.07	763.8	53 2	11.8	86	W	18.1	8.1			7			0.079	2.0	Raining	Dr. J. A. Sampaio.
Campo Major			30.22	767.5	60.8	16.0	57	S	4.9	2.2			1			0	0		Dr. A. M. R. dos Santos.
Funchal, (Madeira)			30.22	767.6	64.0	17.8	61	NNE	6.3	2.8			5			0	0		Capt. D. A. de Cunha.
Lisbon			30.24	768.2	58 3	14.6	75	SSW	2.5	1.1			0			0	0		The Observatory.
Ponta Delgada, (Azores)			30.09	764.2	60.1	15.6	59	NW	6.9	3.1			4	NE		0.465	11.8		

NOTE.—The originals give the wind-velocity in kilometers per hour; occasionally, the weather by the Vienna symbols; the amount of cloudiness without distinguishing between upper and lower clouds; the barometer corrected but not reduced to sea-level. The rain-fall at Lisbon is measured at noon, instead of 0 h. 6 m., p. m.

RUSSIAN SERIES.

Furnished by the cooperation of Professor H. Wild, Director of the Imperial Central Physical Observatory of Russia, at St. Petersburg.

Warsaw			30.12	765.0	24.3	— 4.3	84	N	7	3			9					Light snow.	Astronomical Obs.
Wilna			30.08	764.0	4.8	—15.1	81	W	2	1			2						Astronomical Obs.
Dorpat			30.11	764.9	— 2 4	—19.1	82	NNW	2	1			0						Physical Cabinet.
St. Petersburg			30.05	763.2	— 7.8	—22.1	83	NW	7	3			1						Central Physical Obs.
Kuopio			30.00	763.4	—13.4	—25.2		Calm	0	0			0						Ch. Forsten.
Kieff			29.80	757.0	11.5	—11.4	82	NW	13	6			0						Physical Cabinet.
Nikolaiev			29.87	758.6	21.7	— 5.7	70	NNW	22	10			0						Kurdakof.
Kertch			29.84	757.9	26.6	— 3.0	80	WNW	11	5			8						Lagorio.
Moscow			29.66	753.3	4.5	—15.3	81	N	13	6			10						Meteorological Obs.
Lugan			29.51	749.5	12.4	—10.9	72	WSW	18	8			2			Blank	Blank		Meteorological Obs.
Archangel			29.93	760.3	—18.8	—28.2	80	Calm	0	0			0						Ogorodnikof.
Tiflis	28.23	717.0	29.66	753.4	43.7	6.5	68	N	4	2			9					Raining	Physical Observatory.
Astrakhan			29.69	754.0	31.1	— 0.5	96	N	9	4			10						Sebastianof.
Kasan			29.35	745.5	20.5	— 6.4	95	SSE	11	5			10					Light snow.	Physical Cabinet.
Orenburg			29.87	758.6	23.5	— 4.7	90	SW	13	6			10						Tschernischef.
Ekaterinburg	28.78	731.0	29.56	758.4	— 6.7	—21.5	82	SE	7	3			10						Meteorogical Obs.
Nukuss			29.87	758.7	55.0	12.8	58	SE	9	4			2						
Kasaly																			Bobrof.
Tashkend	28.60	726.4	30.38	771.7				NE	0	0			0						Michelson.
Barnaul			30.55	775.9	10.8	—11.8	89	Calm	0	0			10						Meteorological Obs.
Yeniseisk			30.43	772.9	— 0.2	—17.9	75	Calm	0	0			0						Marks.
Irkutsk																			Usoizef.
Peking, (China)			30.41	772.3	27.3	— 2.6	98	Calm	0	0			0						Physical Observatory.
Nertchinsk																			Meteorological Obs.
Vladivostock																			
Nikolaievsk, on the Amoor																			

NOTE.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols; they omit the rain-fall. The elevation of Tiflis is 469 meters, or 1,541.8 feet; Ekaterinburg, 306.4? m., or 1,005.2? ft.; Tashkend, 494.2? m., or 1,621.3? ft.; Irkutsk, 392 m., or 1,286 ft.; Nertchinsk, 592.0? m., or 1,942.2? ft.

SPANISH SERIES.

Furnished by the cooperation of Antonio Aguilar, Director of the Royal Observatory at Madrid, and of Don Cecilio Pujazon, Captain R. N. Director of the Naval Observatory at San Fernando.

Madrid			30.20	767.1	59.9	15.5	46	W	3.0	1.33		3	0	SE		0	0		Royal Observatory.
San Fernando			30.28	769.2	59.9	15.5	74	NW	6.5	2.9		0	1		W				Naval Observatory.

NOTE.—The originals give the weather in general terms, as published; rain-fall for San Fernando from preceding to following midnight; wind-velocity for Madrid in kilometers per hour.

SWEDISH SERIES.

Furnished by the coöperation of Professor R. Rubenson, Director of the Royal Swedish Meteorological Institute, at Stockholm, and of Dr. H. H. Hildebrandsson, Chief of the Meteorological Division of the Upsala Observatory.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Haparanda			29.93	760.3	— 0.9	—18.3	100	SE			2		4			0	0		
Umea			30.00	762.0	— 3.6	—19.8	87	SW			2		10			0	0		
Hernosand			29.97	761.2	3.2	—16.0	100	Calm			0		10			0	0		
Stockholm			30.06	763.5	16.9	— 8.4	94	WSW			2		2			0	0		
Wisby			30.16	766.0	21.2	— 6.0	79	WSW			4		7			0.031	0.8		
Sub-Series.																			
Upsala			30.06	763.4	12.2	—11.0	83	SSW	11.9	5.3			1	NW		0.002	0.05		Dr. Hildebrandsson.

Note.—The originals give the wind-force by the scale 0 to 6, and Upsala also velocity in meters per second; occasionally, the weather by the Vienna symbols, or in general terms; no distinction between the amount of upper and lower clouds. The rain-fall is measured at 8 a. m., local time.

SWISS SERIES.

Furnished by the coöperation of Professor R. Wolf, Director of the Observatory at Zurich, and of Professor E. Plantamour, Director of the Observatory at Geneva.

Geneva	28.77	730.7	30.20	767.0	53.1	11.7	66	WSW			1		10			0.52	13.2	Cloudy	The Observatory.
Zurich	28.54	724.8	30.22	767.5	41.0	5.0	98	SE			1		10			0.402	10.2	Raining	The Observatory.

Note.—For Geneva the corresponding departures from the normal values are: Barometer, +4.4 mm; Thermometer, +8.1 cent.; Relative Humidity, —6 per cent.

Note.—The rain-fall is measured at Zurich at 7 a. m. on the following day. The origin ls give the barometer corrected but not reduced to sea-level; the wind-force by the scale 0 to 4 for Zurich; the amount of cloudiness without distinguishing between upper and lower clou ls; the weather in general terms. The elevation of Geneva is 408 meters, or 1,339 feet, and that of Zurich 470 meters, or 1,542 feet.

TURKISH SERIES.

Furnished by the cooperation of A. Coumbary, Effendi, Director of the Central Observatory at Constantinople, and of Professor C. V. A. Van Dyck, Superintendent of the Lee Observatory at Beirut.

Constantinople																			
Fao, (Persian Gulf)																			
Salonica																			
Valona																			
Varna																			
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y			29.96	761.0	58.8	14.9	75	SW			3		10n		SW	0.19	4.8	Overcast	Prof. C. V. A. Van Dyck.

Note.—The originals give the wind-force by the scale 0 to 7, (except Beirut, by the scale 0 to 12, and Constantinople velocity in meters per second;) the weather in general terms as published; no distinction between upper and lower clouds, and, except Constantinople and Beirut, the amount by the scale 0 to 4. It is assumed that the barometer is reduced to sea-level.

CANADIAN SERIES.

Furnished by the cooperation of Professor G. T. Kingston, Director of the Magnetic Observatory at Toronto, and Superintendent of the Meteorological Office of the Dominion of Canada, and the respective Observers. Those marked with a star (*) are also telegraphed daily to the office of the Chief Signal Officer, U. S. Army.

Bathurst, N. B			30.05	763.3	9.5	—12.5	79	NE	8.5	3.8								Fine	Hon. J. Ferguson.
Brockville, Ontario			30.63	778.0	3	—16.1		Calm	0	0		0	0			0	0	Clear	W. R. Bigg.
*Chatham, N. B			30.01	762.2	6	—14.4	92	NW	17	7.6		8ck	2ks	NW	NW	1.64	41.7	Fair	G. A. Blair.
Charlottetown, P. E. Island			29.73	755.1	16	— 8.9	95	N	25	11 2			10n			0.29	7.4	Light snow	H. J. Cundall, C. E.
Cornwall, Ontario			30.62	777.7	1.1	—17.2	100	NW			1	0	0			0	0	Bright	James Smith, M. A.
Dalhousie, N. B			30.12	765.0	7.2	—13.8	88	W			2					0.48	12.2	Clear	H. A. Johnson.
Esquimault, B. C			30.32	770.1	30.0	— 1.1	78	Calm				0	0			0	0	Clear	W. H. Bevis.
*Father Point, Quebec			30.33	770.4	9	—12.6	66	NW	10	4.5		0	0			0	0	Clear	J. McWilliams.
Fredericton, N. B			30.13	765.3	8.1	—13.3	76	NW	13	5.8		0	8?			0.50	12.7	Clear	Prof. Harrison.
*Fort Garry, Manitoba			30.14	765.5	15	— 9.4	95	SW	7	3.1		0	5ks		SW	0	0	Fair	James Stewart.
Goderich, Ontario			30.66	778.7	14.2	— 9.9	79	SE			1	5ck	3s	W		0	0	Clear?	H. J. Strang, M. A.
Granton, Ontario	29.40	746.7	30.61	777.5	8.6	—13.6		SE			1	1c	0	E		0	0	Clear	James Grant.
*Halifax, N. S			29.76	755 9	14	—10.0	87	NW	28	12.5			10ks		N	0.02	0.51	Cloudy	F. Allison, M. A.
Hamilton, Ontario			30.67	779.0	11.5	—11.4	69	W			1	2c	0			0	0	Clear	G. Dickson.
Heart's Content, N. F			29.71	754.6	35	1.7	100	SE			1		10			1.07	27.2	Raining	E. Weedon.
*Kingston, Ontario			30.71	780.0	7	—13.9	79	NW	1	0.4		0	0			0	0	Clear	S. Woods, M. A
*Montreal, Quebec			30.57	776.5	6	—14.4	81	SW	30	13.4		0	2ks			0	0	Clear	C. H. McLeod, C. E.
*Ottawa, Ontario			30.58	776.7	0	—17.8	91	SW	14	6.3		0	0			0	0	Clear	J. B. Haney.
*Parry Sound, Ontario			30.68	779.3	— 6	—21.1	54	S	4	1.8		0	0			0	0	Clear	Rev. R. Mosley.
Port Dover, Ontario			30.66	778.7	10	—12.2	92	N	3	1.3		5ck	0	NW		0	0	Fair	H. Morgan.
Port Hastings, N. S			29.59	751.6	23.9	— 4.6		Calm	0	0						0.40	10.2	Fine	Peter Grant.
Port Stanley, Ontario			30.65	778.5	9	—12.8	96	E	8	3.6		2ck	0	W		0	0	Clear	M. Payne.
*Quebec, Quebec			30.43	772.9	8	—13.3	78	SW	10	4.5		0	0			0	0	Clear	Capt. Ashe, R. N.
*Rockliffe, Ontario			30.66	778.7	—10	—23.3	86	Calm	0	0		0	0			0	0	Clear	
St. John, N. B			30.07	763.8	8	—13.3	89	NW	20	8.9		3k	0			0	0	Clear	G. Murdoch, C. E.
*Saugeen, Ontario			30.61	777.5	10	—12.2	82	S	4	1.8		0	0			0	0	Clear	K. Stewart.
Stayner, Ontario			30.64	778.2	— 3	—19.4	89	SE	1	0.4		0	0			0	0	Clear	R. J. Cole.
Stratford, Ontario	29.21	741.9	30.66	778.7	2.5	—16.4	98	Calm	0	0		2cs	3s	NW		0	0	Fine	C. J. MacGregor, M. A.
*Sydney, C. B			29.61	752.1	24	— 4.4	91	E	1	0.4			10n			0.22	5.6	Light snow	T. C. Hill.
*Toronto, Ontario			30.63	778.0	10	—12.2	79	N	3	1.3		0	2s			0	0	Clear	Magnetic Observatory.
Woodstock, Ontario			30.65	778.5	5.7	—14.6	98	Calm	0	0			9s			0	0	Cloudy	J. Montgomery.
Sub-Series.																			
St. Johns, Newfoundland			29.79	756.7	35.0	1.7	100	SE					10n			0.65	16.5	Raining	John Delany

Note.—The originals for Brockville, Charlottetown, Port Dover, Port Stanley, Stayner, St. Johns, N. F. and those telegraphed, give the amount of cloudiness by the scale 0 to 4. The elevation of Granton is 1,015 feet, or 309.4 m.; Stratford, 1,182 feet, or 360.3 m

UNITED STATES SERIES.

Furnished by the cooperation of Bvt. Brig. Gen. Albert J. Myer, Chief Signal Officer, U. S. Army.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Upper. 0—10.	Clouds. Amount. Low'r. 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Albany, N. Y.			30.58	776.7	6	—14.4	76	Calm	0	0		0	0			0	0	Clear	
Alpena, Mich.			30.61	777.5	8	—13.3	78	W	1	0.4		2c	0	W		0	0	Fair	
Atlantic City, N. J.			30.53	775.4	19	— 7.2	54	NW	12	5.4		0	0			0	0	Clear	
Augusta, Ga.			30.47	773.9	39	3.9	38	NE	12	5.4			10s		E	0	0	Cloudy	
Baltimore, Md.			30.58	776.7	23	— 5.0	60	NW	9	4.0		2cs	2s			0	0	Fair	
Barnegat, N. J.			30.51	774.9	18	— 7.8	62	NW	15	6.7		0	0			0	0	Clear	
Bismarck, Dakota	28.26	717.8	29.99	761.7	24	— 4.4	73	SE	2	0.9			10s			0	0	Cloudy	
Boston, Mass.			30.36	771.1	17.5	— 8.1	76	NW	15	6.7		0	0			0	0	Clear	
Breckenridge, Minn.			30.29	769.4	7	—13.9	77	E	10	4.5		0	2s			0	0	Clear	
Buffalo, N. Y.			30.64	778.2	11	—11.7	79	Calm	0	0		5c	Sm'e			0	0	Fair	
Burlington, Vt.			30.61	777.5	8	—13.3	55	E	4	1.8		0	0			0	0	Clear	
Cairo, Ill.			30.36	771.1	34	1.1	90	N	5	2.2			10n			0.09	2.3	Sleeting	
Cape Hatteras, N. C.			30.41	772.4	33	0.6	69	NE	16	7.2			10s		NE	0	0	Cloudy	
Cape Henry, Va.			30.53	775.4	28	— 2.2	94	N	18	8.0		5c	0			0	0	Fair	
Cape Lookout, N. C.			30.50	774.7	32	0.0	79	NE	29	13.0		0	5s			0	0	Fair	
Cape May, N. J.			30.53	775.4	22	— 5.6	72	N	24	10.7		0	0			0	0	Clear	
Charleston, S. C.			30.45	773.4	39	3.9	31	NE	19	8.5		5cs	5s			0	0	Cloudy	
Cheyenne, Wyoming	24.05	610.9	29.99	761.7	25	— 3.9	60	NW	8	3.6		1c	0			0	0	Clear	
Chicago, Ill.			30.44	773 2	30	— 1.1	67	SE	8	3.6		2cs	0	S		0	0	Fair	
Cincinnati, Ohio			30.41	772.4	30	— 1.1	89	E	3	1.3		5ck	Sm'e	W		0	0	Fair	
Cleveland, Ohio			30.60	777.2	17	— 8.3	67	NE	4	1.8		5c	Sm'e	W	NE	0	0	Fair	
Corsicana, Tex.			30.32	770.1	41	5.0	100	NW	7	3.1			10n			0.07	1.8	Light rain	
Davenport, Iowa			30.44	773.2	24	— 4.4	87	E	1	0.4		1c	4s	W		0	0	Fair	
Denison, Tex.			30.37	771.4	38	3.3	91	NW	6	2.7			10s			0.13	3.3	Cloudy	
Denver, Col.	24.83	630.7	30.05	763.3	28	— 2.2	67	S	1	0.4		0	0			0	0	Clear	
Detroit, Mich.			30.50	770.2	20	— 6.7	70	E	4	1.8		5cs	0			0	0	Fair	
Dodge City, Kan.	27.58	700.5	30.07	763.8	16	— 8.9	63	S	3	1.3		0	2s		SW	0	0	Clear	
Dubuque, Iowa			30.43	772.9	20	— 6.7	70	Calm	0	0		5k	0			0	0	Fair	
Duluth, Minn.			30.32	770.1	27	— 2.8	77	W	4	1.8			10s			0	0	Cloudy	
Eastport, Me.			30.08	764.0	11	—11.7	79	N	36	16.1		0	Haze			0.27	6.9	Clear	
Erie, Pa.			30.61	777.5	15	— 9.4	83	Calm	0	0		5c	Haz.			0	0	Fair	
Escanaba, Mich.			30.50	774.7	15	— 9.4	64	Calm	0	0		5cs	0	SW		0	0	Fair	
Fort Gibson, Indian Ter.			30.31	769.9	38	3.3	90	N	5	2.2			10s		N	Inap.	Inap.	Cloudy	
Ft. St. Michael, Alaska																			
Fort Sill, Indian Ter.	29.09	738.9	30.27	768.8	33	0.6	69	N	2	0.9			10s			1.40	35.6	Cloudy	
Fort Sully, Dakota	28.31	719.1	30.00	762.5	24	— 4.4	74	SE	6	2.7		0	0			0	0	Clear	
Florence, Arizona	28.47	723.1	29.98	761.5	55	12.8		SW				0	0			0	0	Clear	
Galveston, Tex.			30.27	768.8	50	10.0	86	N	18	8.0			10s		N	0.01	0.3	Cloudy	
Grand Haven, Mich.			30.52	775.2	18	— 7.8	83	E	4	1.8		2c	1s	W		0	0	Fair	
Indianapolis, Ind.			30.42	772.7	28	— 2.2	77	E	2	0.9		0	8s,sme'		SE	0	0	Cloudy	
Indianola, Tex.			30.32	770.1	45	7.2	92	N	19	8.5		5k	5s	W	N	0	0	Cloudy	
Jacksonville, Fla.			30.27	768.8	52	11.1	86	N	12	5.4			10s		NE	0.04	1.0	Threatening	
Keokuk, Iowa			30.36	771.1	22	— 5.6	72	E	10	4.5		5c	0	E		0	0	Fair	
Key West, Fla.			30.12	765.0	67	19.4	90	N	10	4.5		0	5ks			0	0	Fair	
Kittyhawk, N. C.			30.52	775.2	30	— 1.1	78	NE	30	13.4		2c	0			0	0	Fair	
Knoxville, Tenn.			30.38	771.6	39	3.9	39	NW	6	2.7		10cs	0			0	0	Cloudy	
La Crosse, Wis.			30.40	772.1	22	— 5.6	72	S	2	0.9		Haz	Haz.			0	0	Hazy	
Leavenworth, Kan.			30.34	770.6	32	0.0	89	SE	4	1.8			10s			0.01	0.3	Cloudy	
Louisville, Ky.			30.43	772.9	29	— 1.7	89	NE	8	3.6			10n			Inap.	Inap.	Light snow	
Lynchburg, Va.			30.63	778.0	25	— 3.9	55	N	2	0.9		10ck	0	NW		0	0	Cloudy	
Malone, N. Y.			30.60	777.2	7	—13.9	7	S	4	1.8		0	0			0	0	Clear	
Marquette, Mich.			30.37	771.4	25	— 3.9	75	SW	4	1.8		0	5s			0	0	Fair	
Memphis, Tenn.			30.34	77..6	36	2.2	80	N	5	2.2			10n		N	0.01	0.3	Light rain	
Milwaukee, Wis.			30.48	774.2	26	— 3.3	76	S	5	2.2		2c	5cs	SW	SW	0	0	Fair	
Mobile Ala.			30.18	766.6	52	11.1	93	NE	8	3.6			10s			0.68	17.3	Cloudy	
Montgomery, Ala.			30.34	770.6	39	3.9	71	NE	11	4.9			10n			0.26	6.6	Light rain	
Morgantown, W. Va.	29.39	746.5	30.55	775.9	20	— 6.7	69	N	3	1.3		8c	0	W		0	0	Fair	
Mt. Washington, N. H.	23.62	597.4	29.82	757.4	— 1	—18.3	66	NW	42	18.8		0	0			0	0	Clear	
Nashville, Tenn.			30.35	770.9	41	5.0	73	E	3	1.3			10s		SW	0.02	0.5	Cloudy	
New Haven, Conn.			30.45	773.4	18	— 7.8	52	N	15	6.7		Haze	0			0	0	Clear	
New London, Conn.			30.42	772.7	20	— 6.7	41	NW	10	4.5		0	0			0	0	Clear	
New Orleans, La.			30.13	765.3	54	12.2	86	N	4	1.8			10s			0.35	8.9	Cloudy	
Newport, R. I.			30.38	771.6	20	— 6.7	52	NW	12	5.4		0	0			0	0	Clear	
New York, N. Y.			30.53	775.4	18	— 7.8	60	NW	9	4.0		0	0			0	0	Clear	
Norfolk, Va.			30.55	776.0	28	— 2.2	67	NE	15	6.7		5c	0			0	0	Fair	
North Platte, Neb.	27.18	690.4	29.90	759.4	22	— 5.6	100	SE	6	2.7			Fog			0	0	Foggy	
Omaha, Neb.	29.13	739.9	30..7	768.8	33	0.6	79	S	4	1.8			10s			0	0	Cloudy	
Oswego, N. Y.			30.56	776.5	12	—11.1	90	NE	2	0.9		0	Haz			0	0	Clear	
Pembina, Dakota			30.15	765.8	21	— 6.1	85	S	12	5.4			10s			0	0	Cloudy	
Philadelphia, Pa.			30.56	776.2	20	— 6.7	41	N	11	4.9		0	0			0	0	Clear	
Pike's Peak, Col.	17.71	449.8	29.92	760.0	8	—13.3	11	W	22	9.8		0	0			0	0	Clear	
Pittsburgh, Pa.			30.47	776.5	17	— 8.3	75	E	6	2.7		2c	0	NE		0	0	Clear	
Port Huron, Mich.			30.50	777.2	15	— 9.4	91	S	4	1.8		8cs	Haz	N		0	0	Hazy	
Portland, Me.			30.29	769.4	19	— 7.2	54	NW	9	4.0		0	0			0	0	Clear	
Portland, Oregon			30.40	772.1	38	3.3	100	Calm	0	0		0	5s			0.36	9.1	Fair	
Punta Rassa, Fla.			30.10	765.1	62.0	16.7	94	NE	11	4.9			10s			0	0	Cloudy	
Rochester, N. Y.			30.65	778.5	9	—12.8	79	W	5	2.2		0	Haz.			0	0	Clear	
Salt Lake City, Utah	25.71	653.0	30.04	763.0	29	— 1.7	89	N	4	1.8		0	0			0	0	Clear	
Sandy Hook, N. J.			30.53	775.4	20	— 6.7	70	NW	15	6.7		0	0			0	0	Clear	
San Diego, Cal.			30.07	763.8	50	10.0	93	Calm	0	0			10s			0	0	Cloudy	
San Francisco, Cal.			30.30	769.1	51	10.6	81	Calm	0	0			10s			0	0	Cloudy	
Santa Fé, N. M.	23.30	591.8	29.84	757.9	25	— 3.9	63	N	8	3.6		0	0			0	0	Clear	
Savannah, Ga.			30.41	772.4	39	3.9	63	NE	10	4.5			10n			0.02	0.5	Light rain	
Shreveport, La.			30.36	771.1	41	5.0	91	N	6	2.7			10s			0.37	9.4	Cloudy	
Smithville, N. C.			30.50	774.7	31	— 0.6	69	N	12	5.4		8ck	0	W		0	0	Cloudy	
Springfield, Mass.			30.45	773.4	21	— 6.1	41	N	3	1.3		0	Haze			0	0	Clear	
St. Louis, Mo.			30.39	771.9	31	— 0.6	79	S	4	0.9			10s			0	0	Cloudy	
St. Marks, Fla.			30.24	768.1	47	8.3	77	NE	4	1.8			10s		NE	0	0	Cloudy	
St. Paul, Minn.			30.29	769.4	21	— 6.1	86	SE	7	3.1		1c	2s			0	0	Fair	
St. Paul's Island, Alaska																			
Thatcher's Island, Mass.			30.33	770.4	20	— 6.7	55	NW	28	12.5		0	0			0	0	Clear	
Toledo, Ohio			30.56	776.2	24	— 6.1	85	NE	6	2.7		5cs	Haz	NW		0	0	Fair	
Tucson, Arizona	27.56	700.0	30.11	764.8	35	2.2		S				2c	0	SW		0	0	Clear	
Tybee Island, Ga.			30.36	771.1	41	5.0	91	N	30	13.4			10n		NE	0.05	1.3	Light rain	
Vicksburg, Miss.			30.29	769.4	43	6.1	92	NE	4	1.8			10s,sm'		N	0.30	7.6	Cloudy	
Virginia City, M. T.	24.24	615.7	29.72	754.9	25	— 3.9	88	Calm	0	0		2k	0	W		Inap.	Inap.	Fair	
Washington, D. C.			30.61	777.5	20.5	— 6.4	66	N	6	2.7		5c	1s	W	W	0	0	Fair	
Wilmington, N. C.			30.51	774.9	31	— 0.6	41	NE	7	3.1		8ck	0	W		0	0	Fair	

UNITED STATES SERIES.—CONTINUED.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Upper. 0—10.	Clouds. Amount. Low'r. 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Wood's Holl, Mass.	.....	.....	30.36	771.1	20	— 6.7	41	N	20	8.9	.....	0	0	.....	.....	0	0	Clear.	
Yankton, Dakota	28.89	733.8	30.27	768.8	25	— 3.9	75	S	3	1.3	.....	0	0	.....	.....	0	0	Clear	
Yuma, Arizona	.....	.....	30.03	762.7	54	12.2	.....	SE	.....	.....	.....	0	0	.....	.....	0	0	Clear	
Sub-Series.																			
Kingston, Jamaica, W. I.	.....	.....	30.17	766.3	72	22.2	78	N	4	1.8	.....	2c	2s	N	.....	0	0	.....	James Gall.
Navassa, W. I.	.....	.....	.....	.....	75	23.9	.....	NE	.....	.....	3	.....	.....	.....	.....	0	0	.....	Dr. G. H. Davison.
Clifton, Ja., W. I.	27.15	689.6	29.97	761.2	63	17.2	83	NE	5.0	2.2	.....	8c	0	NE	.....	0	0	Fine	C. Partridge.
Paramaribo, D. Guiana, S. A.	.....	.....	30.04	763.0	82	27.8	83	E	.....	.....	3	0	6k	.....	.....	0	0	Fair	C. J. Hering.
Batavia, Dutch Guiana, S. A.	30.07	763.7	.....	.....	79.7	26.5	.....	NE	.....	.....	.....	.....	.....	.....	.....	0.423	11.0	Raining	Dr. H. Groot.
Medellin, Colombia, S. A.	25.22	640.6	.....	.....	63.2	17.3	91	Calm	.....	.....	0	.....	10n	.....	.....	1.18	30.0	Light rain	Thomas Herran.
York Factory, B. A.	.....	.....	30.02	762.5	—22 0	—30.0	.....	S	4	1.8	.....	2c	0	W	.....	0	0	Fair	J. Fortescue, W. Wood
Honolulu, Oahu, H. I.	.....	.....	30.14	765.5	69	20.6	95	Calm	.....	.....	0	.....	.....	.....	.....	0	0	Clear	Daniel Smith.
Makawao, Maui, H. I.	.....	.....	29.98	761.5	60	15.6	82	Calm	.....	.....	0	0	4k	.....	.....	0	0	.....	F. L. Clarke.

NOTE.—The originals give the amount of cloudiness by the scale 0 to 4, except York Factory, Makawao, Medellin and Paramaribo. The elevation of the barometer at Bismarck is 1,677 feet, or 511.1 meters; Cheyenne, 6,057.3 ft., or 1,846.2 m.; Clifton, about 2,892 ft., or 881.6 m.; Denver, 5,196 ft., or 1,585.2 m.; Podge City, 2486ft., or 757.5 m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Florence, 1,050 (?) ft. or 472.5 (?) m.; Makawao, 2,207 ft., or 672.1 m.; Morgantown, 1,027.9 ft., or 313.3 m.; Medellin, 4,676 ft., or 1,456.2 m.; Mt. Washington, 6,285 ft., or 1,916.6 m.; North Platte, 2,846 ft. or 867.4 m.; Omaha, 1,054.6 ft., or 321.4 m.; Pike's Peak, 14,150.7 ft., or 4,313.1 m.; Salt Lake City, 4,362.2 ft., or 1,329.6 m.; Santa Fé, 6,862.2 (?) ft., or 2,091.6 (?) m.; Tucson, 2,455 (?) ft., or 775.7 (?) m.; Virginia City, 5,480 (?) ft., or 1,670.3 (?) m.; Yankton, 1,278 ft., or 389.5 m. The following constants are added in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Denver, 5.22 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fé, 6.54 in.; Tucson, 2.59 in.; Virginia City, 5.48 in. The elevation of Batavia is about 6 feet; the barometric readings need the addition of 0.2 mm. or 0.01 in. for reduction to sea-level.

UNITED STATES NAVAL SERIES.

By authority of the **SECRETARY OF THE NAVY.**

Furnished by the coöperation of the Navy Department, through Commodore Daniel Ammen, U. S. N., Chief of Bureau of Navigation.

STATIONS AND VESSELS.	True course toward—	Hourly rate in knots.	*Barometer as reported.		Temperature of the Air.		Relative Humidity.	Wind.				Clouds.				Rain-fall or melted snow in the past 24 hours.		State of Ocean.	Direction of swell from—	Weather.	Observer.
								Direction.	Velocity		Force.	Amount.		Direction.							
												Up'er	Low'r	Up'er	Low'r						
			Inches.	Millimeters.	Fahrenheit.	Centigrade.	Per cent.	From—	Miles per hour.	Meters per second.	0—10.	0—10.	0—10.	From—	From—	Inches.	Millimeters.				
Naval Academy, Annapolis, Md.			30.16	766.1	21	— 6.1		NW			4		2		SE	0	0			Clear	
Naval Hospital, Annapolis, Md.			30.55	776.0	20	— 6.7	100	N			1		2			0	0			Fair	
Navy Yard, Mare Island, Cal.			30.23	767.8	47	8.3	96	SSE			6		8			0	0			Foggy	
Navy Yard, Norfolk, Va.			30.58†	776.7†	30	— 1.1	89	N			6		2c							‡D. clouds	
Navy Yard, Pensacola, Fla.			30.22	767.6	54	12.2	93	NE			4		10		NW	0.625	15.88			‡D. clouds	
Navy Yard, Portsmouth, N.H.			30.30	769.6	15	— 9.4		WNW			3		0							Clear	
¶ Canonicus, New Orleans, La.			30.06	763.5	53	11.7	93	NNE			3		10							Cloudy	
Colorado, New York, N. Y.			30.32	770.1	19	— 7.2		WNW	11	4.9			0			0	0			Blue sky	
Essex, Key West, Fla.			30.15	765.8	70	21.1		NNE			2		4		S					‡D. clouds	
Hartford, Hampton Roads, Va.			30.64	778.2	29	— 1.7		N			3		4		E	0	0	Moderate.	N	Pleasant	
Lackawana, Mare Island, Cal.			30.22	767.6	54	12.2	87	SW			1		10		NE			Smooth		‡D. clouds	
Marion, Port Said, Egypt			29.98	761.5	66	18.9	89	W			3		8		E			Smooth		‡D. clouds	
Michigan, Erie, Pa.			30.35	770.9	9	—12.8	57	NE			1		5		NE					Partly cl'dy	
Monongahela, Baltimore, Md.			30.55	776.0	21	— 6.1		NW			1		1							‡D. clouds	
New Hampshire, Port Royal, S. C.			30.57	776.5	42	5.6		NE			5		10		SW			Smooth		‡D. clouds	
Omaha, Panama			30.09	764.3	74	23.3	88	NW			1		1		S	0	0	mooth		Pleasant	
Ossipee, Pensacola, Fla.			30.21	767.3	53	11.7		NE			5		10		EN1					‡D. clouds	
Pensacola, Panama			30.08	764.0	76	24.4	86	NNW			1		3							Pleasant	
Plymouth, New Orleans, La.			30.16	766.1	60	15.6	76	NNE			2		10			§0.75	§19.1			Misty	
¶ Rio Bravo, Matamoras, Mex.			30.19	766.8	44	6.7	92	W			1		1		SW					‡D. clouds	
Santee, Annapolis, Md.			30.08†	764.0†	25	— 3.9		NW			4		2		SE					Clear	
St. Louis, League Island, Pa.			30.35	770.9	21	— 6.1		NW	6	2.7			0			0	0			Clear	
Vandalia. Constantinople, Turkey.			29.84	757.9	44	6.7	92	NE			4		10		SW					‡D. clouds	
Wabash, Boston, Mass.			30.39	771.9	18	— 7.8		NNW			3		0							Hazy	
Wyoming, Washington, D.C.			30.58†	776.7†	21	— 6.1		NNW			2		1		NW					‡D. clouds	

* It is not known that the barometer is corrected for temperature, instrumental error or elevation. † Aneroid Barometer. ‡ Detached clouds. ¶ Barometer corrected for instrumental error and reduced to sea-level. § Approximated.

UNITED STATES MARINE SERIES

REPORTED TO THE OFFICE OF THE CHIEF SIGNAL OFFICER OF THE ARMY.

NAMES OF VESSELS.	True course toward—	Hourly rate in knots.	Barometer reduced to sea-level.		Temperature of the Air.		Relative Humidity.	Wind.				Clouds.				State of Ocean.	Direction of swell from—	Weather.	Observer.
								Direction.	Velocity.		Force.	Amount.		Direction.					
												Up'er	Low'r	Upper.	Lower.				
			Inches.	Millimeters.	Fahrenheit.	Centigrade.	Per cent.	From—	Miles per hour.	Meters per second.	0—10.	0—10.	0—10.	From—	From—				
PACIFIC MAIL S. S. CO. MARINE SERIES. Furnished by the coöperation of ————, President; Williams, Blanchard & Co., Agents.																			
S. S. City of Peking																			Lt. Z. L. Tanner, U.S.N
OCCIDENTAL AND ORIENTAL S. S. CO. MARINE SERIES. Furnished by the coöperation of George H. Bradbury, President; T. H. Goodman, Agent.																			
S. S. Belgic																			Capt. John Metcalf.
S. S. Gaelic																			Capt. W. H. Kidley.
S. S. Oceanic																			Capt. H. Parsell.
NORTH GERMAN LLOYD OF BREMEN MARINE SERIES. Furnished by the coöperation of A. Schumacher & Co., Agents.																			
S. S. Baltimore																			Capt. H. Andressen.
S. S. Berlin																			Capt. C. Pohle.
S. S. Braunschweig																			Capt. K. Undütsch.
S. S. Nürnberg N. 42°, 28′, W. 46°, 28′	ENE		30.22	767.6	48.9	9.4		SSW			5–6		.8		S	Rough.	SSW	Overcast	Capt. A. Jaeger.
S. S. Ohio																			Capt. G. Meyer.
MARINE SERIES. (Miscellaneous.) Furnished by the coöperation of the Observer named.																			
Schooner Addie Fuller, at Brunswick, Ga			30.24	768.1	45	7.2	92	NE	17	7.6			10d		NE				Capt. James Jorgensen

NOTE.—The schooner Addie Fuller gives the amount of cloudiness by the scale 0 to 4.

COLLATED AT THE OFFICE OF THE CHIEF SIGNAL OFFICER OF THE ARMY, WASHINGTON, D. C.

The records which appear in this Bulletin are copied from the regular exchanges of this office, made in each instance in compliance with an especial reques and are published for the uses of the coöperating observers. The barometric readings in the first two columns are reduced to freezing and their respective standards; those in the second two also to mean sea-level. The "weather" is generally published as given.

When the distinction between the upper and lower strata of clouds is not reported, the *kinds* or *types*, viz: cirrus, cumulus, stratus, nimbus, scud, fracto, pallio, haze, fog and smoke, as indicated, respectively, by the letters c, k, s, n, d, f, p, hz., fg. and sm'e, are generally published with the amount in the lower-cloud column. The distinction between the upper and lower strata is carefully made in the United States Series and a portion of the Canadian Series, and the types are indicated by the above letters or their combinations in the proper column.

Albert J. Myer

Brig Gen. (Bvt. Assg'd.) Chief Signal Officer, U. S. A.

BULLETIN

OF

INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON FEBRUARY 15, 1877.

7:35 A. M. WASHINGTON mean time.

6:7 A. M. MEXICO mean time.
7:7 A. M. SAN JOSE mean time.
0:6 P. M. LISBON mean time.
0:28 P. M. MADRID mean time.
0:43 P. M. GREENWICH mean time.
0:53 P. M. PARIS mean time.
1:1 P. M. BRUSSELS mean time.
1:4 P. M. UTRECHT mean time.
1:13 P. M. BERNE mean time.
1:26 P. M. CHRISTIANIA mean time.
1:33 P. M. COPENHAGEN mean time.
1:33 P. M. ROME mean time.
1:37 P. M. BERLIN mean time.
1:49 P. M. VIENNA mean time.
1:55 P. M. STOCKHOLM mean time.
2:18 P. M. ATHENS mean time.
2:39 P. M. CONSTANTINOPLE mean time.
2:44 P. M. ST. PETERSBURG mean time.
6:36 P. M. CALCUTTA mean time.
10:2 P. M. TOKEI mean time.

ALGERIAN SERIES.

Furnished by the coöperation of General d'Eudeville, Commandant Supérieur du Génie in Algeria.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Nemours			30.09	764.3	66.4	19.1		SSE			3		1			0	0	Clear	Michel.
Algiers			30.15	765.8	65.7	18.7		SW			2		2			0	0	Clear	Biscarrat.
La Calle			30.10	766.0	66.2	19.0		NW			4		2			0	0	Clear	Fleury.
Tunis			30.24	768.1	66.2	19.0		NW			5		2			0	0	Clear	Jacques.
Sfax																			
Saïda			30.14	765.6	68.0	20 0		ESE			3		2			0	0	Clear	Millot.
Tebessa			30.19	766.8	67.4	14.1		NW			3		0			0	0	Clear	Bourgeois.
Geriville			30.17	766.2	45.1	7.3		SSE			2		2			0	0	Clear	Lemaillot.
Laghouat			30.17	766.3	70.0	21.1		E			1		1			0	0	Clear	Guyot.
Biskra			30.17	766.4	64.6	18.1		NW			3		0			0	0	Clear	Kuntz.

NOTE.—In the originals the distinction between the amount of upper and lower clouds is apparently not made. The weather is published as given. The rain-fall is measured at 7 a. m., local time.

AUSTRIAN SERIES.

Furnished by the coöperation of Professor Dr. Julius Hann, Director of the Imperial and Royal Central Meteorological Institute at Vienna.

Agram			30.28	769.2	43.0	6.1	65	NE			2		7			0	0		Prof. Ivan Stozir.
Cracow, I. R. Observatory			30.20	767.0	34.9	1.6	96	NE			1		10			0	0		Dr. Wierzbiski.
Eperies			30.30	769.6	27.3	— 2.6	70	Calm			0		0			0	0		Julius Mikolik.
Gratz	28.97	735.9	30.27	768.8	41.4	5.2	68	SSW			2		4			0	0		Andreas Rospini.
Hermannstadt	28.85	732 8	30.40	772.1	21.4	— 5.9	77	N			1		0			0	0		Prof. Reissenberger
Kremsmünster	28.76	730.4	30.13	765.4	42.8	6.0	91	NNE			1		10			0	0		Prof. C. Wagner.
Lemberg			30.27	768.8	23.0	— 5.0	93	SW			1		0			0	0		Dr. T. Stanecki.
Nyiregyhaza																			Habzsuda Daniel.
Pola			30.25	768.3	52.7	11.5	66	S			1		1c			0	0		I.R.Hydrographic Office.
Szegedin			30.30	771.2	31.6	— 0.2	81	SE			2		7			0	0		Karl Stancel.
Trieste			30.27	768.8	50.5	10.3	69	W			1		0			0	0	Clear	Prof. V. Faroli.
Vienna			30.24	768.2	31.5	— 0.3	94	ESE			1		10			0.024	0.6		I. R. Central Met. Obs'y.

No. ...—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 7 p. m., local time. The elevation of Gratz is 343.5 meters, or 1,126.9 feet: Hermannstadt, 407.8 meters, or 1,337.9 feet; Kremsmünster, 383.6 meters, or 1,258.5 feet.

BELGIAN SERIES.

Furnished by the cooperation of J. C. Houzeau, Director of the Royal Observatory at Brussels.

Arlon			30.10	764.5	48.9	9.4	75	W			2		7			0	0		Royal Observatory.
Brussels			30.02	762.4	54.0	12.2	71	S			1		10ks		SW	0.002	0.05	Covered	
Furnes			29.98	761.4	53.8	12.1	73	SW			4		4			0.003	0.1		
Maeseyck			30.04	763.0	53.1	11.7	70	SE			2		7			0	0		

NOTE.—In the originals, the weather is occasionally given in general notes.

BRITISH SERIES

Furnished by the cooperation of Robert H. Scott, Esq., Director of the Meteorological Office, London, Alexander Buchan, Secretary of the Scottish Meteorological Society, Edinburgh, and the respective Observers.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Aberdeen			29.44	747.8	48.9	9.4		SSW	11	4.9			6			0	0	*D. clouds	William Boswell.
Ardrossan			29.46	748.3	49	9.4		SSW			6		8					Overcast	William McNeil.
Armagh, Observatory			29.45	748.0	50.0	10.0		S	22	9.8			10					Raining	S. Call, for Dr. Robinson.
Bidston (Liverpool Obs.)			29.66	753.4	53.8	12.1		SSW	30	13.4			9					Overcast	John Hartnup.
Birr Castle, (Parsonstown)			29.52	749.8	46.8	8.2		W			2		8					*D. clouds	J. Dreyer.
Bradford			29.68	753.9	52.1	11.2		S			2		8			0.01	0.3	Blue sky	J. McLandsborough.
Bridgetown, (Barbados)			30.09	763.5	79.0	26.1		SE			3		6					Overcast	Sergt. J. F. Halanen, A.
Cambridge, Observatory			29.87	758.7	49.0	9.4		SSW			1		10					Overcast	H. Todd. [H.C.
Cardington			29.90	759.4	50.0	10.0		SW			2		10					Overcast	John McLaren.
Carlisle																			T. Bell, for J. Cartmell.
Chatham, School M. E.			30.02	762.5	51.2	10.7		W			2		4					*D. clouds	Capt. Fellows, R. E.
Dartmoor	28.35	720.1	29.86	758.4	46.6	8.1		W			6		10					Gloomy	R. E. Power.
Davos Platz, (Switzerland)	24.95	633.7			41.0	5.0	70	Calm			0		1			0	0	Blue sky	Francis Redford, M. A.
Donaghadee			29.49	749.0	49	9.4		SW			5		10					Overcast	J. Mac Gowan.
Dover			29.53	760.2	50	10.0		SW			3		4					⅛ clouded	J. Costello.
Eccles, (near Manchester)			29.77	756.1	52.3	11.3		SW	4.6	2.1			10					Gloomy	Thomas Mackereth.
Falmouth, Observatory			29.82	757.4	53.9	12.2		S			5		9					Overcast	The Staff.
Fort Napier, (Natal)	27.55	699.8	29.79	756.7	85.2	29.6		E			1		9					Overcast	P'vt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.88	758.9	89.0	31.7		N			1		2					*D. clouds	
Galway, Queen's College			29.51	749.5	47	8.3		SW			2		10					Raining	Prof. A. H. Curtis.
Gibraltar, (Mediterranean)			30.09	764.3	65.3	18.5		W			1		4					*D. clouds	Corpl. C. Aitken, A. H. C.
Glasgow, Observatory			29.44	747.8	50.2	10.1		SSW			4		8					*D. clouds	Lewis Stuart.
Great Yarmouth			29.83	759.2	46	7.8		S			2		6					Misty	G. T. Watson.
Greenwich, Royal Obs'y			29.90	759.4	50.1	10.1		SW			2		10					Overcast	The Staff, for G. B. Airy.
Guernsey			29.90	759.4	52.5	11.4		SSE			2		0					Blue sky	Dr. S. E. Hoskins.
Helston			29.82	757.4	55	12.8		S			6		4c			0.5	12.7	Fine	M. P. Moyle.
Holyhead			29.60	751.8	51	10.6		SSW			6		10					Misty	John Tilston.
Kew, Observatory			29.90	759.4	50.5	10.3		SW	16	7.2			10					Threatening	The Staff.
Kingstown			29.57	751.1	54	12.2		S			4		7					*D. clouds	George Mitchell.
Leicester Museum			29.80	756.9	50.6	10.3		SW			5		10					Overcast	Wm. J. Harrison, F.G.S.
Malta, (Mediterranean)			30.20	767.1	58.6	14.8		NE			2		dk					*D. clouds	Corp'l. P. Bravis, A. H. C.
Nairn			29.30	744.2	50	10.0		SW			2		10					Overcast	W. D. Penny.
Nassau, (Bahamas)			30.18	766.6	69.0	20.6		E			2		8n		NE			Overcast	Surg. Maj. Henry.
Nottingham, Observatory			29.79	756.7	52.7	11.5		SSW			5		10k,d		SW	0	0	Overcast	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			29.78	756.4	51.3	10.7		SSW			4		10					Overcast	Rev. Stephen Whitty.
Oxford, Radcliffe Obs'y			29.85	758.2	52	11.1		SSW			3		10					Gloomy	J. Lucas.
Plymouth			29.86	758.4	53	11.7		SW			3		10					Overcast	John Merrifield.
Roche's Point			29.68	753.9	51	10.6		SW			5		10					Showery	W. Kennedy.
Saint Ann's Head			29.73	755.1	52	11.1		S			6		6					Misty	John C. Walker.
Saint Helier, (Jersey)			29.92	760.0	52.2	11.2		SSE			3		2					¼ clouded	A. P. Amy.
Sandwick Manse, (Orkneys)			29.32	744.7	45.2	7.3		SSW	5	2.2			10					Raining	Rev. C. Clouston, LL. D.
Scarborough																			F. Shaw.
Scutari Cemetery, (Turkey)			30.13	765.3	32.0	0.0		NNE			4		10					Snow-shower	Sergt. W. H. Lyne.
Sheffield			29.76	755.9	52.0	11.1		SW			3		8			0.010	0.25	Overcast	W. F. Cooper.
Silloth Rectory			29.57	751.1	52.5	11.4	72	SW			7		3			0.155	3.94	*D. clouds	Rev. Francis Redford
Stonyhurst, Observatory			29.67	753.6	50.0	10.0		S			4		10					Misty	Rev. S. J. Perry.
Stornoway, Lewis C., (Hebr.)			29.28	743.7	44	6.7		SW			2		10					Raining	John Smith.
Stratfield Turgiss			29.92	760.0	49.5	9.7		SW			1		10					Overcast	Rev. Charles H. Griffith.
Thurso			29.29	744.0	47	8.3		S			1		10					Raining	John Trotter.
Truro, Royal Institution			29.81	757.2	55	12.8		SW			7		9					Gloomy	W. Newcombe.
Valencia, Observatory			29.65	753.1	46.9	8.3		NNW	20	8.9			10					Raining	The Staff.
SUB-SERIES.																			
Calf of Man, (Isle of Man)																			Henry Mercer.
Cape Good Hope, Obs'y			30.06	763.5	71.5	21.9	72	SSE	12	5.4		10	9						The Staff, for E. J. Stone.
Hobart Town, (Tasmania)			29.52	749.8	80.0	26.7	75	NW			2		0			0	0		Francis Abbott, F.R.A.S.
Leith, Restalrig Park			29.48	748.8	53.0	11.7		W			7					0.01	0.3	Light clouds	Andrew Gibb.
Mauritius, Observatory			29.90	759.4				NNW	4.2	1.9						0	0		C. Meldrum.
Melbourne, Observatory			29.94	760.5	63.1	17.3	86	ESE	7	3.1			2			0.22	5.6	Fine	R. L. J. Ellery.
Monach L't-house, (Hebrides)																			J. Youngclause.
North Unst, (Shetland Is.)			29.28	743.7	43	6.1		W.			6		10						Robert Burnet.

NOTE.—Generally, the originals do not give the relative humidity, rain-fall, or distinction between upper and lower clouds. The originals give the wind direction to 32 points and weather by the Beaufort notation. The originals give the barometer for Aberdeen, Cardington, Freetown, Galway, Oxford, St. Helier, Sandwick, Scarborough, Stonyhurst, Leith, Monach and North Unst as read off and the amount of cloudiness for Stornoway by the scale 0 to 4. The wind-force is given by the scale 0 to 12 in the official series; 0 to 6 in the sub-series; except in lbs. per square foot for Greenwich and Hobart Town. The rain-fall is measured at Aberdeen at 10 a. m.; Bradford, 9 a. m.; Hobart Town, 7:30 a. m.; Nottingham, 6 p. m.; Mauritius, 9 a. m., local time. The elevation of Dartmoor is 1,400 feet, or 426.7 meters; Davos Platz, 5,1057 feet, or 1,556.02 meters; Fort Napier, 2,200 feet, or 670.6 meters. *Detached clouds.

By authority of the MINISTER OF FOREIGN AFFAIRS.

COSTA RICA SERIES.

Furnished by the cooperation of Senor Federico Naison, Director of the Central Office of Statistics and Meteorology.

San José																			

DANISH SERIES.

Furnished by the cooperation of Captain N. Hoffmeyer, Director of the Royal Danish Meteorological Institute at Copenhagen.

Copenhagen			29.78	756.4	37.9	3.3	98	W			2		10						
Fanöe			29.83	757.7	42.3	5.7	96	WSW			4		1					Foggy	
Godthaab, (Greenland)			29.80	757.0	2.5	—16.4	85	NNE			6		8						
Stykkisholm, (Iceland)			28.97	735.7	33.6	0.9	96	SE			2		8						
Thorshavn, (Faröe)			29.10	739.1	42.1	5.6	82	SW			5		7					Raining	
Vestervig			29.73	755.2	40.6	4.8	100	SSW			2		8						

NOTE.—The originals give the wind-force by the scale 0 to 6; occasionally, weather by Vienna symbols; no distinction between the amount of upper and lower clouds.

FRENCH SERIES.

Furnished by the co operation of His Excellency, U. J. Le Verrier, Director of the Paris Observatory, and the respective Observers.

STATIONS.	Barometer, corrected for instrum'tal error and temperature. Inches.	Barometer, corrected for instrum'tal error and temperature. Millimeters.	Barometer, reduced to sea-level. Inches.	Barometer, reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Alençon	.....	.....	30.03	762 8	51.8	11	82	S	.....	.....	1	2c	.....	S	.....	0	0	Slightly cl'dy	Normal School.
Amiens	.....	.....	30.01	762.2	55.8	13.2	86	W	.....	.....	3	.....	5	.....	W	0	0	Cloudy	Normal School.
Avignon	.....	.....	30.13	765.4	62.2	16.8	59	NNE	.....	.....	1	.....	10	.....	.....	0	0	Lightly cov.	Normal School.
Bar-sur-Seine †	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.075	1.9	.....	C. Saillard.
Beaumette, (near Angers)	.....	.....	29.93	760.3	51.3	10.7	70	S	3.1	1.4	.....	.....	.....	.....	SSW	0	0	.....	Beaumette Observ'tory.
Beauvais	.....	.....	30.01	762.2	52.3	11.3	68	SSE	.....	.....	2	.....	5	.....	SSE	0.010	0.25	Cloudy	Normal School.
Besançon	.....	.....	30.10	764.4	52.7	11.5	81	E	.....	.....	3	.....	0	.....	.....	0.28	7.	Clear	Normal School.
Bourg en Bresse	.....	.....	30.17	766.3	55.9	13.3	71	S	.....	.....	2	2c	.....	NE	.....	0.059	1.5	Slightly cl'dy	Normal School.
Bourges	.....	.....	30.01	762.3	54.7	12.6	79	SSE	.....	.....	2	.....	2	.....	SE	0	0	Slightly cl'dy	Normal School.
Brest	.....	.....	29.84	757.9	57.0	13.9	69	SW	.....	.....	4	.....	9	.....	SW	0	0	.....	Naval Observatory.
Carcassonne	.....	.....	30.29	769.4	54.5	12.5	86	NE	.....	.....	1	.....	10	.....	SW	0	0	Covered	Normal School.
Caen	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Chartres	.....	.....	29.90	759.4	50.0	10	89	S	.....	.....	2	.....	10	.....	S	0	0	Covered	Normal School.
Châlons-sur-Marne	.....	.....	30.06	763.4	53.6	12.0	59	S	.....	.....	3	2c	.....	N	.....	0	0	Slightly cl'dy	Normal School.
Clermont	.....	.....	29.92	760.0	68.0	20.0	47	E	.....	.....	1	.....	0	.....	.....	0	0	.....	Puy de Dome Obs'y.
Commercy	.....	.....	30.21	767.2	48.9	9.4	81	SE	.....	.....	2	.....	0	.....	.....	0.047	1.2	Clear	Normal School.
Commune de Gréasque*	.....	.....	30.17	766.2	63.5	17.5	42	SE	.....	.....	4	.....	5	.....	SE	0	0	.....	M. Kina.
Grenoble	.....	.....	30.11	764.9	52.2	11.2	76	NE	.....	.....	2	.....	2cs	.....	SE	0	0	Slightly cl'dy	Normal School.
La Roche-sur-Yon	.....	.....	30.02	762.5	54.7	12.6	70	NW	.....	.....	1	.....	5	.....	NW	0	0	Cloudy	Normal School.
Le Mans	.....	.....	29.99	761.8	50.9	10.5	77	SW	.....	.....	4	.....	2	.....	SW	0	0	Slightly cl'dy	Normal School.
Lons-Le-Saulnier	.....	.....	30.07	763.8	50.2	10.1	84	N	.....	.....	1	.....	0	.....	.....	0	0	Clear	Normal School.
Lorient	.....	.....	29.96	761.0	56.1	13.4	73	S	.....	.....	3	.....	2	.....	S	0	0	Slightly cl'dy	Naval Observatory.
Mâcon	.....	.....	30.17	766.2	50.7	10.4	93	S	.....	.....	1	.....	5	.....	SW	0	0	Cloudy	Normal School.
Metz	.....	.....	30.15	765.8	47.7	8.7	80	ESE	.....	.....	2	.....	5cs	.....	ESE	0.047	1.2	.....	M. Schuster.
Mirecourt	.....	.....	30.09	764.3	50.0	10	82	NW	.....	.....	1	.....	1	.....	SE	0	0	Fair	Normal School.
Nismes	.....	.....	30.17	766.2	61.9	16.6	56	SE	.....	.....	2	.....	.n	.....	SE	0	0	.....	Normal School.
Orleans	.....	.....	29.98	761.5	51.4	10.8	82	ESE	.....	.....	2	.....	0	.....	.....	0	0	Clear	Normal School.
Paris, Observatory	.....	.....	30.00	761.9	51.4	10.8	76	SE	.....	.....	2	.....	9k	.....	SE	0	0	Almost cov'd	National Observatory.
Parthenay	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Privas	.....	.....	30.13	765.3	58.6	14.8	55	SE	.....	.....	2	.....	10	.....	S	0	0	Covered	Normal School.
Rochefort, Observatory	.....	.....	30.00	762.1	55.6	13.1	74	SE	.....	.....	3	.....	1	.....	N	0	0	Clear	Naval Observatory.
Rouen	.....	.....	29.97	761.3	55.4	13.0	81	SSE	.....	.....	3	.....	2	.....	S	0	0	Slightly cl'dy	Normal School.
Saint Lo	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Tarbes	28.98	736.1	30.04	763.1	64.4	18	71	WNW	.....	.....	2	.....	0	.....	.....	0	0	Clear	Normal School.
Villefranche	.....	.....	30.09	764.2	55.4	13	85	SE	.....	.....	2	.....	10	.....	.....	0	0	Covered	Normal School.
SUB-SERIES.																			
Fort de France, Martinique	.....	.....	29.89	759.2	79.2	26.2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	L'Abbé Marchési.
Marseilles	.....	.....	30.09	764.3	62.4	16.9	63	SE	.....	.....	1	.....	4	.....	.....	0	0	Cloudy	Marseilles Observatory.
Mont-Louis	24.90	632.4	30.21	767.4	55.9	13.3	28	SW	7.4	3.33	.....	.....	4	.....	SE	0	0	.....	—. Falguère.
Montsouris, Paris	.....	.....	29.99	761.8	51.1	10.6	78	SE	.....	.....	3	.....	9	.....	SSE	0	0	.....	Montsouris Observatory
Perpignan	.....	.....	30.10	764.6	53.4	11.9	81	NE	5.6	2.50	.....	.....	10	.....	W	0	0	.....	Dr. Fines.
Pic du Midi, (Summit,) H. P.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. Baylac.
Pic du Midi, (Plantade,) H. P.	22.51	571.8	.....	.....	46.8	8.2	.....	N	.....	.....	1	.....	8	.....	.....	0	0	Fair	General de Nansouty.
Saint Maur, (near Paris)	.....	.....	30.00	761.9	51.0	10.9	75	SE	.....	.....	2	.....	9	.....	.....	0	0	.....	E. Renou.
Toulouse	.....	.....	30.08	764.1	56.5	13.6	73	SE	.....	.....	6	.....	3	.....	.....	0	0	.....	Toulouse Observatory.
Tours	.....	.....	29.98	761.4	52.2	11.2	71	SW	.....	.....	1	.....	7	.....	WSW	0	0	.....	C. Marquet.
Versailles, (near Paris)	.....	.....	30.00	762.1	51.8	11.0	77	S	.....	.....	1	.....	9	.....	.....	0	0	Almost cov'd	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai)	.....	.....	30.54	775.7	30.7	— 0.7	79	WNW	6.8	2.8	.....	.....	0	.....	.....	0	0	.....	Marc Dechevrens, S. J.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—Generally, the originals give the wind-force by the scale 0 to 7; no distinction between upper and lower clouds, and, in the official series, the amount by the scale 0 to 4 the rain-fall as measured at 7, 8 or 9 a. m., local time; at Clermont, 9 a. m. of the following day; the weather in general terms as published. The elevation of Clermont is 388 meters, or 1,272.9 feet; Commune de Gréasque, 322 meters, or 1,056.4 feet; Tarbes, 308 meters, or 1,010 feet; Mont-Louis, 1,586.40 meters, or 5,204.8 feet; Pic du Midi, (Summit,) 2,877 meters, or 9,439.1 feet; Pic du Midi, (Plantade,) 2,360 meters, or 7,762.6 feet. In correcting the Mont-Louis barometric observations for altitude, the constant 135. millimeters has been added. *Bouches-du-Rhône †Observation not simultaneous.

GERMAN SERIES.

Furnished by the coöperation of Professor Dr. G. Neumayer, Director of the German Naval Observatory, Hamburg.

Bamberg	.....	.....	30.14	765.5	46.4	8.0	86	WNW	.....	.....	3	.....	10	W	.....	0.039	1.0	.....	Prof. T. Hoh.
Berlin	.....	.....	30.01	762.3	41.9	5.5	92	S	.....	.....	1	.....	10	.....	.....	0.047	1.2	Light rain	Prof. Arndt.
Breslau	.....	.....	30.09	764.3	35.8	2.1	82	SSE	.....	.....	2	.....	10	.....	.....	0	0	.....	Royal University Obs'y
Carlsruhe	.....	.....	30.09	764.2	52.9	11.6	66	S	.....	.....	1	.....	10	.....	.....	0.071	1.8	.....	A. Senz.
Cassel	.....	.....	30.09	764.2	50.9	10.5	74	W	.....	.....	2	.....	8	WSW	.....	0	0	.....	Dr. H. Möhl.
Crefeld	.....	.....	30.03	762.7	55.2	12.9	73	SW	.....	.....	2	.....	9	.....	.....	0	0	.....	Director Lose.
Emden	.....	.....	30.01	762.2	51.1	10.6	86	W	.....	.....	2	.....	5	.....	.....	0.028	0.7	.....	Prof. Prestel.
Frankfort on the Main	.....	.....	30.17	766.2	54.5	12.5	65	SW	.....	.....	2	.....	9	.....	.....	0	0	.....	Physical Society.
Friedrichshafen	28 71	729.3	30.17	766.3	48.6	9.2	87	NNE	.....	.....	2	.....	8	.....	.....	0	0	.....	M. Wilhelm.
Hamburg	.....	.....	29.95	760.8	47.7	8.7	91	WSW	.....	.....	3	.....	10n	.....	.....	0.150	3.8	Cloudy	Captain F. Hegemann.
Kiel	.....	.....	29.88	759.0	46.0	7.8	95	SW	.....	.....	4	.....	10	.....	.....	0.094	2.4	.....	Prof. G. Karsten.
Königsberg, (Prussia)	.....	.....	30.04	763.1	25.5	— 3.6	75	SW	.....	.....	5	.....	5	.....	.....	0	0	.....	Prof. E. Luther.
Köslin	.....	.....	29.94	760.4	32.7	0.4	.....	S	.....	.....	2	.....	10	.....	.....	.....	.....	Raining	H. Müller.
Leipsic	.....	.....	30.06	763.4	50.9	10.5	71	SW	.....	.....	3	.....	6	WSW	.....	0.047	1.2	.....	Prof. Bruhns.
Memel	.....	.....	30.08	763.9	14.7	— 9.6	91	SSE	.....	.....	3	.....	10ks	.....	.....	0	0	.....	Reinbrecht & Skalweit.
Münster	.....	.....	29.98	761.5	52.7	11.5	85	SW	.....	.....	1	.....	3	.....	.....	0	0	.....	Prof. E. Heis.
Neufahrwasser	.....	.....	30.01	762.2	28.6	— 1.9	78	SSW	.....	.....	5	.....	10	.....	.....	0.024	0.6	.....	A Lothe.
Posen	.....	.....	30.04	762.9	34.9	1.6	75	S	.....	.....	2	.....	10	.....	.....	0.016	0.4	.....	Dr. Magener.
Strassburg, (in Alsace)	.....	.....	30.13	765.3	51.6	10.9	69	NE	.....	.....	2	.....	10	SE	.....	0.055	1.4	.....	Dr. Schur.
Stuttgart	.....	.....	30.12	765.1	50.4	10.2	68	S	.....	.....	6	.....	7	.....	.....	0	0	.....	Prof. Schoder.
Thorn	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Dr. Hasenbalg.
Treves, (Trier)	.....	.....	29.98	761.4	52.7	11.5	72	WNW	.....	.....	2	.....	10	.....	.....	0	0	Foggy	Prof. Flesch.
Weissenburg, (Bavaria)	28.60	726.4	30.13	765.3	47.3	8.5	67	WNW	.....	.....	1	.....	10	NW	.....	0.012	0.3	.....	Dr. von Bebber.
Wustrow, Naval School	.....	.....	29.95	760.7	38.1	3.4	93	SW	.....	.....	6	.....	10	.....	.....	0	0	Foggy	E. F. Schütz.
GERMAN NAVAL SERIES.																			
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—The elevation of Friedrichshafen is 412.4 meters, or 1,356.3 feet; Weissenburg, 431 meters, or 1,414.4 ft. In the originals the distinction between the amount of upper and lower clouds is not made. It is not always certain that the remarks in the weather column refer to the moment of observation.

GREEK SERIES.

Furnished by the coöperation of Professor Dr. J. F. Julius Schmidt, Director of the Royal Observatory at Athens.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Athens			30.14	765.6	40.1	4.5		NE			Strong							Cloudy	

NOTE.—The originals give the barometer corrected, but not reduced to sea-level; occasionally the kind of clouds; the weather as published. They omit the humidity, wind-force, amount of cloudiness and rain-fall.

INDIAN SERIES.

Furnished by the coöperation of H. F. Blanford, Meteorological Reporter to the Government of India.

Kurrachee																			
Deesa																			
Bombay																			
Poona																			
Lahore																			
Belgaum																			
Bangalore																			
Rorkee																			
Agra																			
Trichinopoly																			
Nagpur																			
Madras																			
Lucknow																			
Allahabad																			
Patna																			
Hazaribagh																			
Cuttack																			
Calcutta (Alipore)																			
Goalpara																			
Chittagong																			
Sibsagar																			
Rangoon																			
Jubbulpore																			

ITALIAN SERIES.

Furnished by the cooperation of His Excellency the Minister of Agriculture, Industry and Commerce, and the respective Observers.

Udine			30.23	767.9	52.5	11.4	47	W	2.7	1.1		5				0	0		Prof. Giovanni Clodig.
Stelvio	22.22	564.5			27.0	— 2.8		W			1	5	SE			1.228	31.2	Snowing	Signora Ernesta Manfredi.
Valdobbia	22.26	565.5			31.8	— 0.1	74	W			2	4	NW			0	0		Ab. Dom. Mongini.
Padua			30.23	767.9	51.8	11.0	63	ESE	4.4	2.2		4	SE			0	0		Prof. Dott. Lorenzoni.
Vicenza			30.23	767.8	51.6	10.9	53	E	1.8	0.8		2				0	0		Conte Alm. Da Schio.
Verona			30.24	768.0	55.4	13.0	68	E			1	0				0	0		Dott. B. Bertoncelli.
Bergamo	28.85	732.9	30.20	767.1	51.1	10.6	37	SSW			2	3				0	0		Prof Trionfini Carlo.
Domodossola			30.21	767.3	52.7	11.5	51	SW			6	3				0.098	2.5		Prof. Giuseppe Calza.
Milan			30.22	767.6	54.3	12.4	78	ESE			2	2	SE			0	0		Ab. Gio. Capelli
Pavia			30.23	767.7	51.1	10.6	68	S			1	2	NE			0	0		Prof. Gio. Cantoni.
Moncalieri			30.23	767.8	51.8	11.0	67	SSE	0.7	0.3		4	W			0	0		Pro. P. F. Denza.
Mondovi	28.27	718.1	30.22	767.5	50.2	10.1	64	NW			4	2				0	0		Prof. ... C. Bruno.
Porto Maurizio			30.23	767.8	55.9	13.3	66	E			4	3				0	0		Prof. ... Vassallo.
Genoa			30.20	767.0	60.6	15.9	53	SE	3.1	1.4		0				0	0		Prof. G. M. Garibaldi.
Piacenza			30.25	768.3	51.1	10.6	58	E	3.8	1.7		2	W			0	0		Dott. G. ...anzi.
Parma			30.23	767.8	52.2	11.2	77	SE			2	1				0	0		Prof. P. Pigorini.
Florence			30.23	767.9	58.1	14.5	44	N			4	1	NW			0	0		Cav. F. Meucci.
Leghorn			30.21	767.2	59.4	15.2	64	SSW	4.5	1.9		6	W			0	0		Prof. P. Monte.
Siena	28.98	736.0	30.20	767.1	56.8	13.8	55	SE	0	0		1	W			0	0		Prof. L. Toscani.
Urbino	28.65	727.7	30.24	768.1	51.4	10.8	55	NE			2	0				0	0		Prof. F. Serpieri.
Pesaro			30.24	768.1	50.7	10.4	65	E	23.0	10.3		0				0	0		Prof. Luigi Guidi.
Ancona			30.24	768.0	54.7	12.6	48	SE			4	1				0	0		Prof. F. De— Bosis.
Grosseto			30.24	768.1	60.4	15.8	53	SSE			4	4	S			0	0		Avv. P. Ponticelli.
Rome			30.24	768.1	61.2	16.2	50	SW	1.5	0.6		0				0	0		Prof's. P. Secchi & L. Respighi.
Naples, O. U			30.23	767.8	60.8	16.0	39	SW			2	0				0	0		Prof. L. Palmieri.
Lecce			30.23	767.7	61.4	16.8	46	N	15.4	6.9		0				0	0		Prof. C. De—Giorgi.
Cosenza			30.25	768.5	54.9	12.7	48	NW	1.8	0.8		0				0	0		Prof. F. D. Conti.
Cagliari			30.17	766.3	59.0	15.0	74	SW			1	5	E			0	0		Prof. A. Pacinotti.
Ilposto, (Sicily)			30.25	768.6	58.6	14.8	67	SE			2	2				0	0		Prof. F. Caffero.
Palermo			30.17	766.4	58.1	14.6	51	NE	5.1	2.5		1				0	0		Prof. G. Cavcattore.
Caltanissetta	28.20	716.2	30.18	766.6	55.8	13.2	16	NNW			6	0				0	0		Prof. A. Pagani.
Siracusa			30.24	768.1	59.2	15.1	57	ESE			2	3	W			0	0		Prof. V. Giuliano.
Sub-Series.																			
Naples, S. R.			29.95	760.8	57.9	14.4	81	N	0	0		0				0	0		Prof. F. Brioschi.

NOTE.—The originals give the wind-force by the scale 0 to 4, or the velocity in kilometers per hour; generally, no distinction between upper and lower clouds, occasionally the weather by the Vienna symbols. The elevation of Stelvio is 2,543.0 meters, or 8,342.9 feet; Valdobbia, 2,548.0 meters or 8,359.3 feet; Belgamo, 379.9 meters, or 1,247.3 feet; Mondovi, 556 meters, or 1,824.2 feet; Siena, 348.5 meters, or 1,143.3 feet; Urbino, 451 meters, or 1,479.7 feet; Caltanissetta, 570.3 meters, or 1,871.0 feet.

JAPANESE SERIES.

Furnished by the coöperation of the Imperial University of Tokei, Japan.

Tokei																			Prof. P. V. Zeeder.

NOTE.—The originals give the amount of cloudiness by the scale 0 to 4 without distinguishing between upper and lower clouds. The rain-fall is measured at 7 a. m., local time.

By authority of the SECRETARY OF PUBLIC WORKS.

MEXICAN SERIES.

Furnished by the coöperation of Senor Mariano Barcena, Director of the Central Meteorological Observatory in the City of Mexico.

STATIONS.	Barometer, corrected for instrum'tal error and temperature. Inches.	Barometer, corrected for instrum'tal error and temperature. Millimeters.	Barometer, reduced to sea-level. Inches.	Barometer, reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Mexico																			Mariano Barcena.
																			Vicente Reyes.
																			Miguel Perez.

NOTE.—The elevation of Mexico is 2,290 meters, or 7,512.9 feet. The rain-fall is measured at 6 a. m., local time. (Engineers in charge.)

NETHERLANDS' SERIES.

Furnished by the cooperation of Professor Buys Ballot, Director of the Royal Meteorological Institute of the Netherlands at Utrecht.

Flushing			30.02	762.4	51.4	10.8		SSW			4					0.039	1.0		
Groningen			29.90	759.4	48.2	9.0										0.012	0.3		
Helder			29.94	760.4	47.3	8.5		SSW			4					0.024	0.6		
Utrecht			29.97	761.2	52.7	11.5	82	SW			3		10			0	0	Overcast	

NOTE.—The originals give the wind-pressure in kilograms per square meter; for Utrecht, they give the weather as published, from which the amount of cloudiness is taken by the scale 0 to 4, without distinguishing between upper and lower clouds. It is assumed that the barometer readings have been reduced to sea-level.

NORWEGIAN SERIES.

Furnished by the cooperation of Professor H. Mohn, Director of the Royal Norwegian Meteorological Institute at Christiania.

Bergen			29.52	749.8	39.0	3.9	97	S	16.8	7.5			10			0.559	14.2	Raining	
Brönö			29.52	749.7	28.4	— 2.0	80	ENE	6.7	3			6			0.031	0.8		
Christiania			29.64	752.8	26.6	— 3.0	98	ESE	0	0			10			0.091	2.3	Light fog	
Tromsö			29.69	754.2	48.9	9.4	81	W	4.5	2			3			0	0		

NOTE.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols. The cloudiness and weather at Bergen refer to 2h., p. m., local time, instead of 1h., 4 min.

PORTUGUESE SERIES.

Furnished by the coopera on of J. C. de Brito Capello, Director of the Meteorological Observatory of the Infante Don Luiz at Lisbon.

Angra, (Azores)			30.34	770.6	53.6	12.0	61	NNE	4.9	2.2			4			0.189	4.8		Dr. J. A. Sampaio.
Campo Major			30.08	764.1	52.7	11.5	73	ESE	4.3	1.9			10	NE		0	0		Dr. A. M. R. dos Santos.
Funchal, (Madeira)			30.06	763.4	62.6	17.0	55	WSW	14.3	6.4			4			0.189	4.8		Capt. D. A. de Cunha.
Lisbon			30.04	762.9	57.0	13.9	75	SSE	15.0	6.7			0			0	0		The Observatory.
Ponta Delgada, (Azores)			30.32	770.1	55.9	13.3	57	N	4.9	2.2			3	E		0.083	2.1		

NOTE.—The originals give the wind-velocity in kilometers per hour; occasionally, the weather by the Vienna symbols; the amount of cloudiness without distinguishing between upper and lower clouds; the barometer corrected but not reduced to sea-level. The rain-fall at Libson is measured at noon, instead of 0 h. 6 m., p. m.

RUSSIAN SERIES.

Furnished by the cooperation of Professor H. Wild, Director of the Imperial Central Physical Observatory of Russia, at St. Petersburg.

Warsaw			30.16	766.0	27.5	— 2.5	87	SE	11	5			10						Astronomical Obs.
Wilna			30.23	767.9	11.1	—11.6	77	SSW	13	6			1						Astronomical Obs.
Dorpat			30.04	763.0	10.4	—12.0	79	SSW	9	4			10						Physical Cabinet.
St. Petersburg			29.91	759.8	12.9	—10.6	91	SW	13	6			10					Light snow	Central Physical Obs.
Kuopio			29.72	755.0	8.2	—16.0	100	SE	7	3			10					Snowing	Ch. Forsten.
Kieff			30.27	768.8	8.6	—13.0	80	N	2	1			0					Smoke-haze	Physical Cabinet.
Nikolaiev			30.31	769.8	14.9	— 9.5	71	N	7	2			3						Kurdakof
Kertch			29.98	761.6	18.5	— 7.5	78	NNW	13	6			10						Lagorio.
Moscow			30.16	766.1	1.4	—17.0	69	N	7	3			0						Meteorological Obs.
Lugan			30.06	763.5	10.4	—12.0	74	W	4	2			8						Meteorological Obs.
Archangel			29.82	757.5	—13.4	—25.2	86	N	7	3			1						Ogorodnikof.
Tiflis	28.01	726.7	30.08	764.0	37.2	2.9	85	SE	4	2			10					Light rain	Physical Observatory.
Astrakhan			30.15	765.9	19.9	— 6.7	81	W	2	1			10						Sebastianof.
Kasan			29.69	754.1	3.2	—16.0	78	W	16	7			10						Physical Cabinet.
Orenburg			29.78	756.5	29.7	— 1.3	90	SE	18	8			10						Tschernischei.
Ekaterinburg	28.34	719.3	29.30	744.2	22.5	— 5.3	80	SW	27	12			10						Meteorological Obs.
Nukuss			30.07	763.7	42.8	6.0	75	W	9	4			8						
Kasaly																			Bobrof.
Tashkend	28.07	728.1	30.39	772.0	53.2	11.8	35	NNE	4	2			0						Michelson.
Barnaul			30.65	778.6	9.9	—12.3	93	Calm	0	0			0						Meteorological Obs.
Yeniseisk			30.65	778.5	— 3.6	—19.8	78	Calm	0	0			0						Marks.
Irkutsk																			Usolzef.
Peking, (China)			30.37	771.3	26.2	— 3.2	65	Calm	0	0			0						Physical Observatory.
Nertchinsk																			Meteorological Obs.
Vladivostock																			
Nikolaievsk, on the Amoor																			

NOTE.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols; they omit the rain-fall. The elevation of Tiflis is 400 meters, or 1,341.8 feet; Ekaterinburg, 306.4? m., or 1,005.2? ft.; Tashkend, 494.2? m., or 1,621.3? ft.; Irkutsk, 392 m., or 1,286 ft.; Nertchinsk, 592.0? m., or 1,942.2? ft.

SPANISH SERIES.

Furnished by the cooperation of Antonio Aguilar, Director of the Royal Observatory at Madrid, and of Don Cecilio Pujazon, Captain R. N. Director of the Naval Observatory at San Fernando.

Madrid			30.09	764.2	57.9	14.4	59	S	3.7	1.67		1	0	S		0	0		Royal Observatory.
San Fernando			30.13	765.4	62.1	16.7	68	S	0	0		4	4	S	S				Naval Observatory.

NOTE.—The originals give the weather in general terms, as published; rain-fall for San Fernando from preceding to following midnight; wind-velocity for Madrid in kilometers per hour.

SWEDISH SERIES.

Furnished by the coöperation of Professor R. Rubenson, Director of the Royal Swedish Meteorological Institute, at Stockholm, and of Dr. H. H. Hildebrandsson, Chief of the Meteorological Division of the Upsala Observatory.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Haparanda			29.77	756.1	3.2	—16.0	99	SE			2		0			0.08	2.		
Umea			29.76	755.9	5.4	—14.8	100	NE			2		10			0	0		
Hernosand			29.50	749.3	10.4	—12.0	96	NE			2		10			0	0		
Stockholm			29.69	754.2	30.2	— 1.0	92	WSW			4		10			0.008	0.2		
Wisby			29.80	756.8	31.3	— 0.4	92	SW			6		10			0.004	0.1	Snowing	
Sub-Series.																			
Upsala			29.69	754.1	27.5	— 2.5	92	SSW	6.9	3.1			10			0.067	17.0	Snowing	Dr. Hildebrandsson.

Note.—The originals give the wind-force by the scale 0 to 6, and Upsala also velocity in meters per second; occasionally, the weather by the Vienna symbols, or in general terms; no distinction between the amount of upper and lower clouds. The rain-fall is measured at 8 a. m., local time.

SWISS SERIES.

Furnished by the coöperation of Professor R. Wolf, Director of the Observatory at Zurich, and of Professor E. Plantamour, Director of the Observatory at Geneva.

Geneva	28.69	728.8	30.14	765.5	48.0	8.9	72	NNE			2		2c			0	0		The Observatory.
Zurich	28.49	723.7	30.18	766.5	39.9	4.4	82	SE			1		4			0	0	Fair	The Observatory.

Note.—For Geneva the corresponding departures from the normal values are: Barometer, +2.5 mm; Thermometer, +5.2 cent.; Relative Humidity, +1 per cent.

Note.—The rain-fall is measured at Zurich at 7 a. m. on the following day. The originals give the barometer corrected but not reduced to sea-level; the wind-force by the scale 0 to 4 for Zurich; the amount of cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The elevation of Geneva is 408 meters, or 1,339 feet, and that of Zurich 470 meters, or 1,542 feet.

TURKISH SERIES.

Furnished by the cooperation of A. Coumbary, Effendi, Director of the Central Observatory at Constantinople, and of Professor C. V. A. Van Dyck, Superintendent of the Lee Observatory at Beirut.

Constantinople																			
Fao, (Persian Gulf)																			
Salonica																			
Valona																			
Varna																			
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y			29.90	754.9	62.8	17.1	64	S			5		10n			0.35	8.9	Squally	Prof. C. V. A. Van Dyck.

Note.—The originals give the wind-force by the scale 0 to 7, (except Beirut, by the scale 0 to 12, and Constantinople velocity in meters per second;) the weather in general terms as published; no distinction between upper and lower clouds, and, except Constantinople and Beirut, the amount by the scale 0 to 4. It is assumed that the barometer is reduced to sea-level.

CANADIAN SERIES.

Furnished by the cooperation of Professor G. T. Kingston, Director of the Magnetic Observatory at Toronto, and Superintendent of the Meteorological Office of the Dominion of Canada, and the respective Observers. Those marked with a star (*) are also telegraphed daily to the office of the Chief Signal Officer, U. S. Army.

Bathurst, N. B			30.00	762.0	21.6	— 5.8	66	Calm	0	0								Fine	Hon. J. Ferguson.
Brockville, Ontario			30.31	769.9	10	—12.2		Calm	0	0		2c	0			0	0	Fair	W. R. Bigg.
*Chatham, N. B			30.04	763.0	8	—13.3	91	SW	3	1.3		0	0			0	0	Clear	G. A. Blair.
Charlottetown, P. E. Island			30.00	762.0	16	— 8.9	95	W	10	4.5		0	0			0.05	1.3	Clear	H. J. Cundall, C. E.
Cornwall, Ontario			30.30	769.6	3.9	—15.6	100	SW			1	0	1s			0	0	Bright	James Smith, M. A.
Dalhousie, N. B			30.05	763.3	19.9	— 6.7	80	W			2					0	0	Clear	H. A. Johnson.
Esquimault, B. C			30.39	771.9	32.1	0.1	100	N				1cs	0			0	0	Clear	W. H. Bevis.
*Father Point, Quebec			30.11	764.8	22	— 5.6	83	SW	16	7.2			10n			0	0	Threatening	J. McWilliams.
Fredericton, N. B			30.22	767.6	4.4	—15.3	90	Calm	0	0		2cs	0	NW		0	0	Fair	Prof. Harrison.
*Fort Garry, Manitoba			29.97	761.2	16	— 8.9	94	W	7	3.1		0	2ks		W	0	0	Fair	James Stewart.
Goderich, Ontario			30.25	768.3	27.6	— 2.4	87	SE			1		10n			0.05	1.3	Threatening	H. J. Strang, M. A.
Granton, Ontario	29.04	737.6	30.21	767.3	25.2	— 3.8		S			1		10n			Inap.	Inap	Cloudy	James Grant.
*Halifax, N. S			30.06	763.5	17	— 8.3	83	W	7	3.1		0	0			0	0	Clear	F. Allison, M. A.
Hamilton, Ontario			30.28	769.1	20.7	— 6.3	85	W			1	10cs	0			0	0	Misty	G. Dickson.
Heart's Content, N. F			29.30	744.2	20	— 6.7	85	NW			5	3k	0	NW		0.14	3.6	Fine	E. Weedon.
*Kingston, Ontario			30.34	770.6	19	— 7.2	92	SE	1	0.4		8c	0			0	0	Fair	S. Woods, M. A
*Montreal, Quebec			30.29	769.4	15	— 9.4	65	SW	16	7.2		5cs	2c			0	0	Fair	C. H. McLeod, C. F.
*Ottawa, Ontario			30.28	769.1	7	—13.9	70	N	4	1.8		0	0			0	0	Clear	J. B. Haney.
*Parry Sound, Ontario			30.24	768.1	20	— 6.7	90	SE	4	1.8			10n		SE	Inap.	Inap.	Light snow	Rev. R. Mosley.
Port Dover, Ontario			30.30	769.6	17	— 8.3	90	Calm	0	0		10k	0	NW		0	0	Fair	H. Morgan.
Port Hastings, N. S			29.91	759.7	18.7	— 7.4		NW	7	3.1						0	0	Fine	Peter Grant.
Port Stanley, Ontario			30.28	769.1	26	— 3.3	84	SE	5	2.2			10n		W	0	0	Cloudy	M. Payne.
*Quebec, Quebec			30.28	769.1	13	—10.4	81	SW	5	2.2			10n		SW	0	0	Cloudy	Capt. Ashe, R. N.
*Rockliffe, Ontario			30.29	769.4	— 2	—18.9	94	Calm	0	0		5cs	5s	NW	NW	0	0	Fair	
St. John, N. B			30.21	767.3	18	— 7.8	68	NW	10	4.5		2cs	0			0	0	Clear	G. Murdoch, C. E.
*Saugeen, Ontario			30.20	767.1	26	— 3.3	94	Calm	0	0			10s			0	0	Cloudy	K. Stewart.
Stayner, Ontario			30.23	767.8	24	— 4.4	81	SE	4	1.8			10n		SE	0	0	Cloudy	R. J. Cole.
Stratford, Ontario	28.90	734.0	30.24	768.1	24.4	— 4.2	73	SW	2	0.9			10s			0	0	Cloudy	C. J. MacGregor, M. A.
*Sydney, C. B			29.86	758.4	20	— 6.7	72	W	7	3.1		2ck	0	NW		0.07	1.8	Clear	T. C. Hill.
*Toronto, Ontario			30.27	768.8	21	— 6.1	88	NE	1	0.4			10n		W	0	0	Cloudy	Magnetic Observatory.
Woodstock, Ontario			30.22	767.6	25.5	— 3.6	95	Calm	0	0			10s			0	0	Cloudy	J. Montgomery.
Sub-Series.																			
St. Johns, Newfoundland			29.44	747.8	24.0	— 4.4		Calm				Sm'e	10s			0.24	6.1	Fair	John Delany

Note.—The originals for Brockville, Charlottetown, Port Dover, Port Stanley, Stayner, St. Johns, N. F. and those telegraphed, give the amount of cloudiness by the scale 0 to 4. The elevation of Granton is 1,015 feet, or 309.4 m.; Stratford, 1,182 feet, or 360.3 m

UNITED STATES SERIES.

Furnished by the coöperation of Bvt. Brig. Gen. Albert J. Myer, Chief Signal Officer, U. S. Army.

STATIONS.	Barometer: Corrected for instrum'tal error and temperature. Inches.	Barometer: Corrected for instrum'tal error and temperature. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain fall or melted snow in the past 24 hours. Inches	Rain fall or melted snow in the past 24 hours. Millimeters.	Weather	Observer.
Albany, N. Y.	.....	.....	30.44	773.2	8	—13.3	76	Calm	0	0	.....	2c	0	.....	.....	0	0	Fair	
Alpena, Mich.	.....	.....	30.17	766.3	25	— 3.9	87	SW	2	0.9	.....	.....	10s	.....	SW	0	0	Cloudy	
Atlantic City, N. J.	.....	.....	30.46	773.7	25	— 3.9	75	N	4	1.8	.....	1c	0	.....	.....	0	0	Clear	
Augusta, Ga.	.....	.....	30.39	771.9	34	1.1	90	NE	5	2.2	.....	.....	10n	.....	NE	0.45	11.4	Light rain	
Baltimore, Md.	.....	.....	30.46	773.7	29	— 1.7	78	Calm	0	0	.....	5ck	2s, fg	.....	.....	0	0	Foggy	
Barnegat, N. J.	.....	.....	30.44	773.2	27	— 2.8	77	W	4	1.8	.....	2c	Haze	.....	.....	0	0	Fair	
Bismarck, Dakota	28.26	717.8	29.98	761.5	25	— 3.9	74	NW	1	0.4	.....	.....	10s	.....	.....	0	0	Cloudy	
Boston, Mass.	.....	.....	30.35	770.9	26	— 3.3	64	W	2	0.9	.....	4cs	Sm'c	W	.....	0	0	Fair	
Breckenridge, Minn.	.....	.....	30.02	762.5	28	— 2.2	88	SE	4	1.8	.....	.....	10s	.....	.....	Inap.	Inap.	Cloudy	
Buffalo, N. Y.	.....	.....	30.26	768.6	28	— 2.2	87	SW	4	1.8	.....	5c	Haze	.....	.....	0	0	Fair	
Burlington, Vt.	.....	.....	30.36	771.1	19	— 7.2	69	S	5	2.2	.....	2c	0	.....	.....	0	0	Fair	
Cairo, Ill.	.....	.....	30.30	769.6	40	4.4	73	Calm	0	0	.....	.....	10s	.....	.....	Inap.	Inap.	Cloudy	
Cape Hatteras, N. C.	.....	.....	30.31	769.9	41	5.0	83	NE	12	5.4	.....	8cs	2ks	SW	.....	0	0	Cloudy	
Cape Henry, Va.	.....	.....	30.42	772.7	37	2.8	62	N	12	5.4	.....	5c	0	.....	.....	0	0	Fair	
Cape Lookout, N. C.	.....	.....	30.40	772.1	38	3.3	81	NE	16	7.2	.....	.....	10s	.....	NE	0	0	Cloudy	
Cape May, N. J.	.....	.....	30.45	773.4	31	— 0.6	79	NE	2	0.9	.....	5ck	0	W	.....	0	0	Fair	
Charleston, S. C.	.....	.....	30.31	769.9	38	3.3	80	NE	14	6.3	.....	.....	10n	.....	NE	1.10	27.9	Light rain	
Cheyenne, Wyoming	24.02	610.1	29.96	761.0	29	— 1.7	100	N	20	8.9	.....	.....	10n	.....	.....	0.01	0.3	Light snow	
Chicago, Ill.	.....	.....	30.22	767.6	32	0.0	79	S	6	2.7	.....	0	Sm'c	.....	.....	0	0	Clear	
Cincinnati, Ohio.	.....	.....	30.24	768.1	40	4.4	63	SE	4	1.8	.....	.....	10s	.....	.....	0	0	Cloudy	
Cleveland, Ohio.	.....	.....	30.28	769.1	32	0.0	69	E	7	3.1	.....	.....	10s	.....	E	0	0	Cloudy	
Corsicana, Tex.	.....	.....	30.26	768.6	43	6.1	91	SE	1	0.4	.....	.....	10s	.....	.....	0.04	1.0	Cloudy	
Davenport, Iowa.	.....	.....	30.20	767.1	35	1.7	79	SW	1	0.4	.....	.....	10s	.....	.....	0	0	Threatening	
Denison, Tex.	.....	.....	30.28	769.1	42	5.6	83	SW	4	1.8	.....	.....	10s	.....	S	0	0	Cloudy	
Denver, Col.	24.79	629.6	30.01	762.2	32	0.0	79	Calm	0	0	.....	0	5s	.....	.....	0	0	Fair	
Detroit, Mich.	.....	.....	30.22	767.6	31	— 0.6	79	SW	5	2.2	.....	.....	10s	.....	SW	0	0	Cloudy	
Dodge City, Kan.	27.43	696.7	29.81	757.2	30	— 1.1	89	S	6	2.7	.....	.....	10s	.....	.....	0	0	Cloudy	
Dubuque, Iowa.	.....	.....	30.16	766.1	34	1.1	79	SW	4	1.8	.....	.....	10s	.....	.....	0	0	Cloudy	
Duluth, Minn.	.....	.....	30.02	762.5	33	0.6	79	Calm	0	0	.....	.....	10s	.....	.....	0	0	Cloudy	
Eastport, Me.	.....	.....	30.21	767.3	20	— 6.7	70	W	5	2.2	.....	10c	Haze	W	.....	0	0	Cloudy	
Erie, Pa.	.....	.....	30.24	768.1	31	— 0.6	89	SE	14	6.3	.....	5ck	Haze	W	.....	0	0	Fair	
Escanaba, Mich.	.....	.....	30.12	765.0	23	— 5.0	72	Calm	0	0	.....	.....	10s	.....	.....	0	0	Cloudy	
Fort Gibson, Indian Ter.	.....	.....	29.20	767.1	42	5.6	83	S	2	0.9	.....	.....	10s	.....	.....	0	0	Cloudy	
Ft. St. Michael, Alaska	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Fort Sill, Indian Ter.	29.97	735.8	30.12	765.0	40	4.4	71	Calm	0	0	.....	.....	10s	.....	.....	0	0	Cloudy	
Fort Sully, Dakota.	28.36	720.3	30.09	764.3	32	0.0	79	NW	2	0.9	.....	.....	10s	.....	NW	0	0	Cloudy	
Florence, Arizona.	28.35	720.1	29.95	760.7	55	12.8	.....	SW	.....	.....	.....	5k	0	SW	.....	0	0	Fair	
Galveston, Tex.	.....	.....	30.24	768.1	49	9.4	85	NE	14	6.3	.....	.....	10s	.....	.....	0	0	Cloudy	
Grand Haven, Mich.	.....	.....	30.18	766.6	36	2.2	75	S	8	3.6	.....	.....	10s	.....	W	0	0	Cloudy	
Indianapolis, Ind.	.....	.....	30.26	768.6	38	3.3	75	SE	1	0.4	.....	.....	10n,sm	.....	.....	0	0	Cloudy	
Indianola, Tex.	.....	.....	30.24	768.1	49	9.4	78	NE	12	5.4	.....	.....	10ks	.....	N	0	0	Cloudy	
Jacksonville, Fla.	.....	.....	30.22	767.6	45	7.2	92	NW	10	4.5	.....	.....	10s	.....	NW	0.22	5.6	Cloudy	
Keokuk, Iowa.	.....	.....	30.17	766.3	37	2.8	80	Calm	0	0	.....	.....	10s	.....	.....	0	0	Cloudy	
Key West, Fla.	.....	.....	30.13	765.3	65	18.3	83	N	4	1.8	.....	0	5ks	.....	.....	0	0	Fair	
Kittyhawk, N. C.	.....	.....	30.40	772.1	39	3.9	81	NE	18	8.0	.....	8k	0	W	.....	0	0	Fair	
Knoxville, Tenn.	.....	.....	30.35	770.9	38	3.3	46	N	6	2.7	.....	10cs	0	.....	.....	0	0	Cloudy	
La Crosse, Wis.	.....	.....	30.10	764.5	35	1.7	80	S	6	2.7	.....	.....	10s	.....	.....	0	0	Cloudy	
Leavenworth, Kan.	.....	.....	30.16	766.1	39	3.9	82	SW	6	2.7	.....	.....	10s	.....	.....	0	0	Cloudy	
Louisville, Ky.	.....	.....	30.28	769.1	37	2.8	60	Calm	0	0	.....	.....	10s, 1g	.....	.....	0.02	0.5	Cloudy	
Lynchburg, Va.	.....	.....	30.49	774.4	26	— 3.3	60	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Malone, N. Y.	.....	.....	30.26	768.6	20	— 6.7	70	S	7	3.1	.....	0	0	.....	.....	0	0	Clear	
Marquette, Mich.	.....	.....	30.08	764.0	28	— 2.2	67	W	8	3.6	.....	0	0	.....	.....	0	0	Clear	
Memphis, Tenn.	.....	.....	30.31	769.9	40	4.4	91	N	4	1.8	.....	.....	10s	.....	N	0.02	0.5	Cloudy	
Milwaukee, Wis.	.....	.....	30.22	767.6	28	— 2.2	77	W	5	2.2	.....	0	5ks	.....	W	0	0	Fair	
Mobile Ala.	.....	.....	30.26	768.6	42	5.6	91	N	10	4.5	.....	.....	10s	.....	.....	0	0	Cloudy	
Montgomery, Ala.	.....	.....	30.31	769.9	38	3.3	90	NE	6	2.7	.....	.....	10s	.....	.....	0.08	2.0	Threatening	
Morgantown, W. Va.	29.23	742.4	30.36	770.9	28	— 2.2	60	SE	1	0.4	.....	1c	0	W	.....	0	0	Clear	
Mt. Washington, N. H.	23.65	600.7	30.01	762.2	5	—15.0	75	NW	60	26.8	.....	8cs	0	.....	.....	0	0	Fair	
Nashville, Tenn.	.....	.....	30.31	769.9	43	6.1	58	SE	1	0.4	.....	.....	10s	.....	.....	0	0	Cloudy	
New Haven, Conn.	.....	.....	30.43	772.9	28	— 2.2	77	Calm	0	0	.....	0	Fog	.....	.....	0	0	Foggy	
New London, Conn.	.....	.....	30.42	772.7	26	— 3.3	76	Calm	0	0	.....	2cs	0	W	.....	0	0	Fair	
New Orleans, La.	.....	.....	30.23	767.8	48	8.9	81	N	5	2.2	.....	.....	10s	.....	N	Inap.	Inap.	Cloudy	
Newport, R. I.	.....	.....	30.40	772.1	27	— 2.8	69	W	5	2.2	.....	0	1s	.....	.....	0	0	Clear	
New York, N. Y.	.....	.....	30.44	773.2	27	— 2.8	66	SW	2	0.9	.....	5cs	0	SW	.....	0	0	Fair	
Norfolk, Va.	.....	.....	30.44	773.2	34	1.1	65	N	3	1.3	.....	5c	Sm'c	.....	.....	0	0	Fair	
North Platte, Neb.	27.13	689.1	29.77	756.1	35	1.7	80	N	12	5.4	.....	.....	10s	.....	.....	0	0	Cloudy	
Omaha, Neb.	28.06	735.6	30.08	764.0	34	1.1	90	SW	8	3.6	.....	.....	10s	.....	SW	Inap.	Inap.	Cloudy	
Oswego, N. Y.	.....	.....	30.32	770.1	19	— 7.2	70	SE	8	3.6	.....	8cs	1s	.....	.....	0	0	Fair	
Pembina, Dakota.	.....	.....	30.00	762.0	19	— 7.2	84	Calm	0	0	.....	10k	0	.....	.....	Inap	Inap.	Cloudy	
Philadelphia, Pa.	.....	.....	30.47	773.9	33	0.6	60	W	2	0.9	.....	0	5s,sm'	.....	.....	0	0	Fair	
Pike's Peak, Col.	17.61	447.3	29.82	757.4	4	—15.6	100	W	8	3.6	.....	Haze	2s	.....	.....	0	0	Fair	
Pittsburgh, Pa.	.....	.....	30.32	770.1	26	— 3.3	88	E	1	0.4	.....	.....	Fog	.....	.....	0	0	Foggy	
Port Huron, Mich.	.....	.....	30.21	767.3	28	— 2.2	88	SW	4	1.8	.....	.....	10s	.....	W	Inap.	Inap.	Threatening	
Portland, Me.	.....	.....	30.29	769.4	27	— 2.8	88	W	12	5.4	.....	0	8s	.....	.....	0	0	Fair	
Portland, Oregon	.....	.....	30.40	772.1	33	0.6	89	NE	8	3.6	.....	.....	10s	.....	.....	0	0	Cloudy	
Punta Rassa, Fla.	.....	.....	30.16	766.1	62.0	16.7	94	Calm	0	0	.....	.....	Fog	.....	.....	0	0	Foggy	
Rochester, N. Y.	.....	.....	30.20	767.6	25	— 3.9	38	SW	11	4.9	.....	5c	Sm'c	W	.....	0	0	Fair	
Salt Lake City, Utah.	25.74	653.8	30.07	763.8	31	— 0.6	100	Calm	0	0	.....	.....	10s	.....	.....	0.05	1.3	Cloudy	
Sandy Hook, N. J.	.....	.....	30.44	773.2	29	— 1.7	78	SW	8	3.6	.....	5c	0	SW	.....	0	0	Fair	
San Diego, Cal.	.....	.....	29.96	761.0	53	11.7	86	NE	6	2.7	.....	.....	10s	.....	NE	0	0	Cloudy	
San Francisco, Cal.	.....	.....	30.08	764.0	49	9.4	89	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Santa Fé, N. M.	23.20	589.3	29.74	755.4	30	— 1.1	62	E	4	1.8	.....	2k	0	.....	.....	0	0	Clear	
Savannah, Ga.	.....	.....	30.30	769.6	37	2.8	90	NE	12	5.4	.....	.....	10n	.....	NE	1.14	29.0	Light rain	
Shreveport, La.	.....	.....	30.33	770.4	47	8.3	85	Calm	0	0	.....	.....	10s	.....	.....	0	0	Cloudy	
Smithville, N. C.	.....	.....	30.38	771.6	33	0.6	89	N	8	3.6	.....	.....	10s	.....	NW	0.01	0.3	Cloudy	
Springfield, Mass.	.....	.....	30.42	772.7	16	— 8.9	56	Calm	0	0	.....	2c	Haze	W	.....	0	0	Fair	
St. Louis, Mo.	.....	.....	30.28	769.1	33	0.6	89	SW	4	1.8	.....	.....	Fog	.....	.....	0	0	Foggy	
St. Marks, Fla.	.....	.....	30.20	767.1	41	5.0	91	NE	12	5.4	.....	.....	10s	.....	NE	0.41	10.4	Cloudy	
St. Paul, Minn.	.....	.....	30.00	762.0	34	1.1	79	SE	4	1.8	.....	.....	10s	.....	.....	0	0	Cloudy	
St. Paul's Island, Alaska.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Thatcher's Island, Mass.	.....	.....	30.35	770.9	27	— 2.8	42	SW	4	1.8	.....	5c	0	W	.....	0	0	Fair	
Toledo, Ohio.	.....	.....	30.24	768.1	37	2.8	62	Calm	0	0	.....	.....	10s	.....	SW	0	0	Cloudy	
Tucson, Arizona.	27.48	698.0	30.08	764.7	36	2.2	.....	S	.....	.....	.....	5c	0	W	.....	0	0	Fair	
Tybee Island, Ga.	.....	.....	30.24	768.1	40	4.4	100	N	24	10.7	.....	.....	10n	.....	NE	0.57	14.5	Light rain	
Vicksburg, Miss.	.....	.....	30.31	769.9	41.0	5.0	96	Calm	0	0	.....	.....	10s, f.	.....	.....	0.03	0.8	Cloudy	
Virginia City, M. T.	24.30	619.5	29.87	758.7	11	—11.7	69	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Washington, D. C.	.....	.....	30.47	773.9	24.0	— 4.4	69	N	1	0.4	.....	1ck	2s	W	W	0	0	Smoky	
Wilmington, N. C.	.....	.....	30.40	772.1	33	0.6	69	NE	8	3.6	.....	.....	10n	.....	.....	Inap.	Inap.	Light rain	

UNITED STATES SERIES.—CONTINUED.

STATIONS.	BAROMETER. Corrected for instrum'tal error and temperature. Inches.	BAROMETER. Corrected for instrum'tal error and temperature. Millimeters.	BAROMETER. Reduced to sea-level. Inches.	BAROMETER. Reduced to sea-level. Millimeters.	TEMPERATURE OF THE AIR. Fahrenheit.	TEMPERATURE OF THE AIR. Centigrade.	RELATIVE HUMIDITY. Per cent.	WIND. Direction. From—	WIND. Velocity. Miles per hour.	WIND. Velocity. Meters per second.	WIND. Force. 0—10.	CLOUDS. Amount. Up'er 0—10.	CLOUDS. Amount. Low'r 0—10.	CLOUDS. Direction. Upper. From—	CLOUDS. Direction. Lower. From—	RAIN-FALL OR MELTED SNOW IN THE PAST 24 HOURS. Inches.	RAIN-FALL OR MELTED SNOW IN THE PAST 24 HOURS. Millimeters.	WEATHER.	OBSERVER.
Wood's Holl, Mass	.....	.....	30.41	772.4	30	— 1.1	59	NW	5	2.2	.....	1c	0	.....	.....	0	0	Clear	
Yankton, Dakota	28.78	731.0	30.13	765.3	27	— 2.8	82	NW	12	5.4	.....	.....	10s	.....	.....	0	0	Cloudy	
Yuma, Arizona	.....	.....	29.94	760.5	54	12.2	.....	N	.....	.....	.....	5cs	0	W	.....	0	0	Fair	
SUB-SERIES.																			
Kingston, Jamaica, W. I.	.....	.....	30.21	767.3	73	22.8	76	N	4	1.8	.....	2c	2s	.....	N	0	0	.....	James Gall.
Navassa, W. I.	.....	.....	.....	.....	76	24.4	.....	NE	.....	.....	3	.....	.....	.....	.....	0	0	.....	Dr. G. H. Davison.
Clifton, Ja., W. I.	27.21	691.1	30.03	762.7	61	16.1	83	N	1.0	0.4	.....	2c	0	N	.....	0.28	7.1	Fine	C. Partridge.
Paramaribo, D. Guiana, S.A.	.....	.....	30.05	763.3	82	27.8	83	E	.....	.....	2	4k	5ks	E	.....	0	0	Fair	C. J. Hering.
Batavia, Dutch Guiana, S.A.	30.07	763.7	.....	.....	77.0	25	.....	E	.....	.....	.....	.....	.....	.....	.....	0.581	14.75	Cloudy	Dr. H. Groot.
Medellin, Colombia, S. A.	25.22	640.6	.....	.....	65.5	18.6	82	Calm	.....	.....	0	3k	4ks	.....	.....	0.20	5.1	Cloudy	Thomas Herran.
York Factory, B. A.	.....	.....	29.85	758.2	—23.5	—30.8	.....	S	10	4.5	.....	4k	0	N	.....	0	0	Fair	J. Fortescue, W. Wood
Honolulu, Oahu, H. I.	.....	.....	30.12	765.0	68	20.0	95	Calm	.....	.....	0	.....	.....	.....	.....	0	0	Clear	Daniel Smith.
Makawao, Maui, H. I.	.....	.....	30.00	762.0	62	16.7	77	Calm	.....	.....	0	0	0	.....	.....	0	0	.....	F. L. Clarke.

NOTE.—The originals give the amount of cloudiness by the scale 0 to 4, except York Factory, Makawao, Medellin and Paramaribo. The elevation of the barometer at Bismarck is 1,677 feet, or 511.1 meters; Cheyenne, 6,057.3 ft., or 1,846.2 m.; Clifton, about 2,592 ft., or 881.5 m.; Denver, 5,135 ft., or 1,565.2 m.; Dodge City, 2486ft., or 757.5 m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Florence, 1,550 (?) ft., or 472.5 (?) m.; Makawao, 2,205 ft., or 672.1 m.; Morgantown, 1,027.9 ft., or 313.3 m.; Medellin, 4,876 ft., or 1,486.2 m.; Mt. Washington, 6,285 ft., or 1,915.6 m.; North Platte, 2,846 ft., or 867.4 m.; Omaha, 1,054.6 ft., or 321.4 m.; Pike's Peak, 14,150.7 ft., or 4,313.1 m.; Salt Lake City, 4,362.2 ft., or 1,329.6 m.; Santa Fé, 6,862.2 (?) ft., or 2,091.6 (?) m.; Tucson, 2,545 (?) ft., or 775.7 (?) m.; Virginia City, 5,480 (?) ft., or 1,670.3 (?) m.; Yankton, 1,278 ft., or 389.5 m. The following constants are added in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Denver, 5.22 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fé, 6.54 in.; Tucson, 2.59 in.; Virginia City, 5.48 in. The elevation of Batavia is about 6 feet; the barometric readings need the addition of 0.2 mm. or 0.01 in. for reduction to sea-level.

UNITED STATES NAVAL SERIES.

By authority of the **SECRETARY OF THE NAVY.**

Furnished by the coöperation of the Navy Department, through Commodore Daniel Ammen, U. S. N., Chief of Bureau of Navigation.

STATIONS AND VESSELS.	True course toward—	Hourly rate in knots.	*Barometer as reported.		Temperature of the Air.		Relative Humidity.	Wind.				Clouds.				Rain-fall or melted snow in the past 24 hours.		State of Ocean.	Direction of swell from—	Weather.	OBSERVER.
								Direction.	Velocity		Force.	Amount.		Direction.							
												Up'er	Low'r	Up'er	Low'r						
			Inches.	Millimeters.	Fahrenheit.	Centigrade.	Per cent.	From—	Miles per hour.	Meters per second.	0—10.	0—10.	0—10.	From—	From—	Inches.	Millimeters.				
Naval Academy, Annapolis, Md.			30.04	763.0	27	— 2.8		Calm			0		6			0	0			Hazy	
Naval Hospital, Annapolis, Md.			30.45	773.4	26	— 3.3	75	Calm			0		3		SW	0	0			Fair	
Navy Yard, Mare Island, Cal.			30.17	766.3	47.5	8.6	96	WSW			1		0			0	0			Clear	
Navy Yard, Norfolk, Va.			30 52†	775.2†	34	1.1	90	N			2		4cs							‡D. clouds	
Navy Yard, Pensacola, Fla.			30.20	767.1	45	7.2	92	N			2		10		S	0.062	1.57			‡D. clouds	
Navy Yard, Portsmouth, N.H.			30.25	768.3	25	— 3.9		W			3		10		E					Fine	
¶ Canonicus, New Orleans, La.			30.18	766.6	47	8.3	92	NNE			3		10							Cloudy	
Colorado, New York, N. Y.			30.25	768.3	29	— 1.7		WSW					4			0	0			Blue sky	
Essex, Key West, Fla.			30.17	766.3	72	22.2		N			1		3		S					‡D. clouds	
Hartford, Hampton Roads, Va.			30.53	775.4	37	2.8		N			2		2		E	0	0			Pleasant	
Lackawana, Mare Island, Cal.			30.19	766.8	52	11.1	79	Calm			0							Smooth		Foggy	
Marion, Port Said, Egypt			29.77	756.1	66	18.9	85	W			4		10		N			Smooth		Stormy	
Michigan, Erie, Pa.			30.20	767.1	28	— 2.2	88	SSW			1		2		SSW					Partly cl'dy.	
Monongahela, Baltimore, Md.																					
New Hampshire, Port Royal, S. C.			30.42	772.7	40	4.4		NE			3–5		10		S&W			Smooth		Raining	
Omaha, Panama			30.08	764.0	74.5	23.6	90	NW			2		6		NE	0	0	Smooth		Pleasant	
Ossipee, Pensacola, Fla.			30.24	768.1	47	8.3		NE			3									Drizzling	
Pensacola, Panama			30.07	763.8	77	25.0	86	NNW			2									Pleasant	
Plymouth, New Orleans, La.			30.21	767.3	54	12.2	74	N			2		10							Misty	
¶ Rio Bravo, Matamoras, Mex.			30.07	763.8	51	10.6	93	NE			1		10							Raining	
Santee, Annapolis, Md.			29.98	761.5	29	— 1.7		Calm			0		6							Hazy	
St. Louis, League Island, Pa.			30.27	768.8	26	— 3.3		Calm	0	0			2		SW	0	0			Fair	
Vandalia, Constantinople, Turkey.			30.16	766.1	34	1.1	90	N			6		10		SSW					Snowing	
Wabash, Boston, Mass.			30.42	772.7	28	— 2.2		WSW			2		3							Hazy	
Wyoming, Washington, D. C.			30.47†	773.9†	24	— 4.4		Calm			0		3								

* It is not known that the barometer is corrected for temperature, instrumental error or elevation. † Aneroid Barometer. ‡ Detached clouds. ¶ Barometer corrected for instrumental error and reduced to sea-level.

UNITED STATES MARINE SERIES

REPORTED TO THE OFFICE OF THE CHIEF SIGNAL OFFICER OF THE ARMY.

NAMES OF VESSELS.	True course toward—	Hourly rate in knots.	Barometer reduced to sea-level.		Temperature of the Air.		Relative Humidity.	Wind.				Clouds.				State of Ocean.	Direction of swell from—	Weather.	OBSERVER.
								Direction.	Velocity.		Force.	Amount.		Direction.					
												Up'er	Low'r	Upper.	Lower.				
			Inches.	Millimeters.	Fahrenheit.	Centigrade.	Per cent.	From—	Miles per hour.	Meters per second.	0—10.	0—10.	0—10.	From—	From—				
PACIFIC MAIL S. S. CO. MARINE SERIES. Furnished by the coöperation of ————, President; Williams, Blanchard & Co., Agents.																			
S. S. City of Peking																			Lt. Z. L. Tanner, U.S.N
OCCIDENTAL AND ORIENTAL S. S. CO. MARINE SERIES. Furnished by the coöperation of George H. Bradbury, President; T. H. Goodman, Agent.																			
S. S. Belgic																			Capt. John Metcalf.
S. S. Gaelic																			Capt. W. H. Kidley.
S. S. Oceanic																			Capt. H. Parsell.
NORTH GERMAN LLOYD OF BREMEN MARINE SERIES. Furnished by the coöperation of A. Schumacher & Co., Agents.																			
S. S. Baltimore																			Capt. H. Andressen.
S. S. Berlin																			Capt. C. Pohle.
S. S. Braunschweig																			Capt. K. Undütsch.
S. S. Nürnberg N. 45°, 8′, W. 38°, 42′	ENE		29.84	757.9	52.2	11.2		S			7–8		..ks		S	High scu.	S	Overcast	Capt. A. Jaeger.
S. S. Ohio																			Capt. G. Meyer.
MARINE SERIES. (Miscellaneous.) Furnished by the coöperation of the Observer named.																			
Schooner Addie Fuller, at Brunswick, Ga			30.18	766.6	42	5.6	100	NE	11	4.9			10n		NE			Rainy	Capt. James Jorgensen

NOTE.—The schooner Addie Fuller gives the amount of cloudiness by the scale 0 to 4.

COLLATED AT THE OFFICE OF THE CHIEF SIGNAL OFFICER OF THE ARMY, WASHINGTON, D. C.

The records which appear in this Bulletin are copied from the regular exchanges of this office, made in each instance in compliance with an especial reques and are published for the uses of the coöperating observers. The barometric readings in the first two columns are reduced to freezing and their respective standards; those in the second two also to mean sea-level. The "weather" is generally published as given.

When the distinction between the upper and lower strata of clouds is not reported, the *kinds* or *types*, viz: cirrus, cumulus, stratus, nimbus, scud, fracto, pallio, haze, fog and smoke, as indicated, respectively, by the letters c, k, s, n, d, f, p, hz., fg. and sm'e, are generally published with the amount in the lower-cloud column. The distinction between the upper and lower strata is carefully made in the United States Series and a portion of the Canadian Series, and the types are indicated by the above letters or their combinations in the proper column.

Albert J. Myer

Brig. Gen. (Bvt. Assg'd.) Chief Signal Officer, U. S. A.

BULLETIN

OF

INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON FEBRUARY 16, 1877.

7:35 A. M. WASHINGTON mean time.

6:7 A. M. MEXICO mean time.
7:7 A. M. SAN JOSE mean time.
0:0 P. M. LISBON mean time.
0:28 P. M. MADRID mean time.
0:43 P. M. GREENWICH mean time.
0:53 P. M. PARIS mean time.
1:1 P. M. BRUSSELS mean time.
1:4 P. M. UTRECHT mean time.
1:18 P. M. BERNE mean time.
1:26 P. M. CHRISTIANIA mean time.

1:33 P. M. COPENHAGEN mean time.
1:33 P. M. ROME mean time.
1:37 P. M. BERLIN mean time.
1:49 P. M. VIENNA mean time.
1:55 P. M. STOCKHOLM mean time.
2:18 P. M. ATHENS mean time.
2:30 P. M. CONSTANTINOPLE mean time.
2:44 P. M. ST. PETERSBURG mean time.
6:36 P. M. CALCUTTA mean time.
10:2 P. M. TOKEI mean time.

ALGERIAN SERIES.

Furnished by the coöperation of General d'Eudeville, Commandant Supérieur du Génie in Algeria.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Nemours			30.16	766.1	71.6	22.0		SSE			1		1			0	0	Clear	Michel.
Algiers			30.19	766.9	62.6	17.0		SW			2		1			0	0	Clear	Biscarrat.
La Calle			30.08	764.1	61.2	16.2		E			3		1			0	0	Clear	Fleury.
Tunis			30.20	767.1	61.0	16.1		E			3		2			0	0	Clear	Jacques.
Sfax																			
Saida			30.17	766.2	70.3	21.3		ENE			3		2			0	0	Clear	Millot.
Tebessa			30.13	765.4	62.8	17.1		SE			2		0			0	0	Clear	Bourgeois.
Geriville			30.19	766.8	50 7	10.4		NNW			2		4			0	0	Clear	Lemaillot.
Laghouat			30.17	766.4	68.0	20.0		S			1		2			0	0	Clear	Guyot.
Biskra			30.13	765.4	71.8	22.1		N			3		0			0	0	Clear	Kuntz.

NOTE.—In the originals the distinction between the amount of upper and lower clouds is apparently not made. The weather is published as given. The rain-fall is measured at 7 a. m., local time.

AUSTRIAN SERIES.

Furnished by the cooperation of Professor Dr. Julius Hann, Director of the Imperial and Royal Central Meteorological Institute at Vienna.

Agram			30.05	763.2	54.5	12.5	60	SW			4		4			0	0		Prof. Ivan Stoxir.
Cracow, I. R. Observatory			30.01	762.3	41.7	5.4	69	NE			1		4			0.008	0.2		Dr. Wierzbiski.
Eperies			30.19	766.9	30.0	— 1.1	74	S			2		9cs,fog		N	0	0		Julius Mikolik.
Gratz	28.78	730.9	30.05	763.3	45.0	7.2	73	SW			1		0			0	0		Andreas Rospini.
Hermannstadt	28.78	730.9	30.30	769.5	26.8	— 2.9	78	ESE			1		6			0	0		Prof. Reissenberger.
Kremsmünster	28.66	727.8	30.05	763.2	35.6	2.0	93	Calm			0		10			0	0		Prof. C. Wagner.
Lemberg			30.06	763.4	35.1	1.7	96	S			2		8			0	0		Dr. T. Stanecki.
Nyiregyhaza																			Habsuda Daniel.
Pola			30.19	766.7	54.0	12.2	78	SSE			2		10s			0	0		I.R.Hydrographic Office.
Szegedin			30.56	776.2	41.0	5.0	75	SE			3		0			0	0		Karl Stancel.
Trieste			30.19	766.9	53.6	12.0	65	Calm			0		10			0.031	0.8	Raining	Prof. V. Farolfi.
Vienna			30.10	764.4	34.5	1.4	78	S			1		10			0	0		I. R. Central Met. Obs'y.

No. ...—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 7 p. m., local time. The elevation of Gratz is 343.5 meters, or 1,126.9 feet; Hermannstadt, 407.8 meters, or 1,337.9 feet; Kremsmünster, 383.6 meters, or 1,258.5 feet.

BELGIAN SERIES.

Furnished by the cooperation of J. C. Houzeau, Director of the Royal Observatory at Brussels.

Arlon			29.90	759.5	48.2	9.0	69	SW			4		10			0.185	4.7		Royal Observatory.
Brussels			29.80	756.9	45.7	7.6	92	W			2		10n		WNW	0.203	5 15	Raining	
Furnes			29.79	756.6	45.9	7.7	66	NW			2		5			0.114	2.9		
Maeseyck			29.80	756.9	48.7	9.3	88	SSW			4		10			0.138	3.5	Raining	

NOTE.—In the originals, the weather is occasionally given in general notes.

BRITISH SERIES

Furnished by the coöperation of Robert H. Scott, Esq., Director of the Meteorological Office, London, Alexander Buchan, Secretary of the Scottish Meteorological Society, Edinburgh, and the respective Observers.

STATIONS.	Barometer: Corrected for instrumental error and temperature. Inches.	Barometer: Corrected for instrumental error and temperature. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Upper. 0—10.	Clouds. Amount. Lower. 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Aberdeen			29.40	746.7	44.0	6.7		WNW	41	18.3			2			0.010	0.25	Blue sky	William Boswell.
Ardrossan			29.53	751.6	47	8.3		WNW			6		6					*D. clouds	William McNeil.
Armagh, Observatory			29.82	757.4	44.6	7.0		W	12	5.4			7					*D. clouds	S. Call, for Dr. Robinson.
Bidston (Liverpool Obs.)			29.75	755.6	44.1	6.7		W	34	15.2			7					*D. clouds	John Hartnup.
Birr Castle, (Parsonstown)			29.93	760.2	46.4	8.0		W			3–4		6					*D. clouds	J. Dreyer.
Bradford			29.09	754.1	45.4	7.4		W			3		10			0.03	0.8	Overcast	J. McLandsborough.
Bridgetown, (Barbados)			30.08	764.0	82.0	27.8		NE			1		5					*D. clouds	Sergt. J. F. Halanen, A.
Cambridge, Observatory			29.79	756.7	47.0	8.3		W			3		7			Blank	Blank	*D. clouds	H. Todd. [H.C.
Cardington			29.82	757.4	46.4	8.0		W			2		2					*D. clouds	John McLaren.
Carlisle																			T. Bell, for J. Cartmell.
Chatham, School M. E.			29.95	760.7	46.2	7.9		N			4		0					Blue sky	Maj. C. N. Martin, R.E.
Dartmoor	28.47	723.1	30.01	762.2	40.0	4.4		NW			4		8					Showery	R. E. Power.
Davos Platz, (Switzerland)	24.84	d30.9			47.0	8.3	64	Calm			0		2			0	0	Hazy	Francis Redford, M. A.
Donaghadee			29.73	755.1	47	8.3		W			4		3					*D. clouds	J. Mac Gowan.
Dover			29.83	757.7	45	7.2		WNW			3		4					½ clouded	J. Costello.
Eccles, (near Manchester)			29.73	755.1	45.4	7.4		NW	3.8	1.7			7					*D. clouds	Thomas Mackereth.
Falmouth, Observatory			29.99	761.7	47.6	8.7		W			3		8					Overcast	The Staff.
Fort Napier, (Natal)	27.69	703.3	29.92	760.0	65.9	18.8		E			2		10					Raining	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.88	758.9	87.0	30.6		N			0		3					*D. clouds	
Galway, Queen's College			29.89	759.2	46	7.8		W			2		5					*D. clouds	Prof. A. H. Curtis.
Gibraltar, (Mediterranean)			29.93	760.2	63.4	17.4		NW			2		9					Overcast	Corpl. C. Aitken, A.H.C.
Glasgow, Observatory			29.57	751.1	44.6	7.0		W			2		9					Gloomy	Lewis Stuart.
Great Yarmouth			29.74	755.4	45	7.2		WNW			4		4					Hazy	G. T. Watson.
Greenwich, Royal Obs'y			29.85	758.2	46.0	7.8		WNW			2		6			Blank	Blank	*D. clouds	The Staff, for G. B. Airy.
Guernsey			29.96	761.0	48.5	9.2		WNW			3		5					*D. clouds	Dr. S. E. Hoskins.
Helston			29.96	761.0	48	8.9		NW			6		4c						M. P. Moyle.
Holyhead			29.81	757.2	45	7.2		WNW			6		1					Blue sky	John Tilston.
Kew, Observatory			29.86	758.4	46.3	7.9		WNW	17	7.6			5					Threatening	The Staff.
Kingstown			29.85	758.2	45	7.2		WNW			5		4					*D. clouds	George Mitchell.
Leicester Museum			29.79	756.7	45.8	7.7		W			6		8					*D. clouds	Wm. J. Harrison, F.G.S.
Malta, (Mediterranean)			30.27	768.8	60.8	16.0		SE			3		6k					*D. clouds	Corp'l. P. Bravis, A.H.C.
Nairn			29.41	747.0	43	6.1		W			3		5					½ clouded	W. D. Penny.
Nassau, (Bahamas)			30.20	767.1	72.5	23.1		E			3		8			Inap	Inap	Overcast	Surg. Maj. Henry.
Nottingham, Observatory			29.77	756.1	47.3	8.5		WSW			3		10k,c		WSW	0.330	8.38	Overcast	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			29.79	756.7	46.8	8.2		W			4		9					*D. clouds	Rev. Stephen Whitty.
Oxford, Radcliffe Obs'y			29.84	757.9	45	7.2		W			1		7					*D. clouds	J. Lucas.
Plymouth			29.94	760.5	47	8.3		W			2		10					Raining	John Merrifield.
Roche's Point			29.96	761.0	47	8.3		NW			5		5					Cloudy	W. Kennedy.
Saint Ann's Head			29.90	759.4	45	7.2		NW			4		5					*D. clouds	John C. Walker.
Saint Helier, (Jersey)			29.97	761.2	51.5	10.8		W			3		2					¼ clouded	A. P. Amy.
Sandwick Manse, (Orkneys)			29.29	744.0	41.7	5.4		NW	29	13.0			5					*D. clouds	Rev. C. Clouston, LL. D.
Scarborough																			F. Shaw.
Scutari Cemetery, (Turkey)			30.28	769.1	33.4	0.8		NE			1		10					Snow-shower	Sergt. W. H. Lyne.
Sheffield			29.72	754.9	45.9	7.7		SW			3		10			0	0	Overcast	W. F. Cooper.
Silloth Rectory			29.08	753.9	47.0	8.3	75	NW			3		3			0	0	*D. clouds	Rev. Francis Redford
Stonyhurst, Observatory			29.73	755.1	43.9	6.6		W			5		6					*D. clouds	Rev. S. J. Perry.
Stornoway, Lewis C., (Hebr.)			29.45	748.0	42	5.6		NW			5		10					Showery	John Smith.
Stratfield Turgiss			29.85	758.2	47.6	8.7		NW			2		2					Blue sky	Rev. Charles H. Griffith.
Thurso			29.35	745.5	45	7.2		NNW			6		5					*D. clouds	John Trotter.
Truro, Royal Institution			29.96	761.0	51	10.6		NW			6		6					*D. clouds	W. Newcombe.
Valencia, Observatory			30.05	763.3	46.2	7.9		NW	17	7.6			6					*D. clouds	The Staff.
SUB-SERIES.																			
Calf of Man, (Isle of Man)																			Henry Mercer.
Cape Good Hope, Obs'y			30.05	763.3	75.6	24.2	51	S	27	12.1		0	2						The Staff, for E. J. Stone.
Hobart Town, (Tasmania)			29.52	749.8	75.0	23.9	83	N			2		7n			0	0	Cloudy	Francis Abbott, F.R.A.S.
Leith, Restalrig Park			29.55	750.6	46.7	8.2		W			3		7k			0.69	2.3	Cloudy	Andrew Gibb.
Mauritius, Observatory			29.92	760.0				ESE	13.3	5.9						0.03	0.8		C. Meldrum.
Melbourne, Observatory			29.97	761.2	60.5	15.8	63	SW	10	4.5			10			0.21	5.3	Showery	R. L. J. Ellery.
Monach L't-house, (Hebrides)																			J. Youngclause.
North Unst, (Shetland Is.)			29.28	743.7	44	6.7		NW			3	7	5	N					Robert Burnet.

NOTE.—Generally, the originals do not give the relative humidity, rain-fall, or distinction between upper and lower clouds. The originals give the wind direction to 32 points and weather by the Beaufort notation. The originals give the barometer for Aberdeen, Cardington, Freetown, Galway, Oxford, St. Helier, Sandwick, Scarborough, Stonyhurst, Leith, Monach and North Unst as read off and the amount of cloudiness for Stornoway by the scale 0 to 4. The wind-force is given by the scale 0 to 12 in the official series; 0 to 6 in the sub-series; except in lbs. per square foot for Greenwich and Hobart Town. The rain-fall is measured at Aberdeen at 10 a. m.; Bradford, 9 a. m.; Hobart Town, 7:30 a. m.; Nottingham, 6 p. m.; Mauritius, 9 a. m., local time. The elevation of Dartmoor is 1,400 feet, or 426.7 meters; Davos Platz, 5,115 feet, or 1,556.0 meters; Fort Napier, 2,200 feet, or 670.6 meters. *Detached clouds.

By authority of the MINISTER OF FOREIGN AFFAIRS.

COSTA RICA SERIES.

Furnished by the coöperation of Senor Federico Maison, Director of the Central Office of Statistics and Meteorology.

San José																			

DANISH SERIES.

Furnished by the coöperation of Captain N. Hoffmeyer, Director of the Royal Danish Meteorological Institute at Copenhagen.

Copenhagen			29.59	751.6	38.1	3.4	92	SSW			4		10					Foggy	
Fanöe			29.52	749.9	40.3	4.6	100	SW			4		10					Rain & fog	
Godthaab, (Greenland)			29.11	739.4	1.9	—16.7	90	NNE			7		10						
Stykkisholm, (Iceland)			29.76	755.8	22.8	— 5.1	96	NE			6		8						
Thorshavn, (Faröe)			29.38	746.2	42.8	6.0	81	NW			4		3						
Vestervig			29.42	747.2	39.6	4.2	100	WSW			2		10					Raining	

NOTE.—The originals give the wind-force by the scale 0 to 6; occasionally, weather by Vienna symbols; no distinction between the amount of upper and lower clouds.

FRENCH SERIES.

Furnished by the co operation of His Excellency, U. J. Le Verrier, Director of the Paris Observatory, and the respective Observers.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather	Observer.
Alençon	.....	.....	29.98	761.5	51.8	11	75	NNW	.....	.....	2	.....	8kn	.....	NNW	0	0	Very cloudy	Normal School.
Amiens	.....	.....	29.93	760.2	49.6	9.8	76	W	.....	.....	3	.....	5	.....	W	0	0	Cloudy	Normal School.
Avignon	.....	.....	30.15	765.9	59.7	15.4	62	SE	.....	.....	2	.....	8	.....	SSE	0	0	Very cloudy	Normal School.
Bar-sur-Seine	.....	.....	29.93	760.3	54.1	12.3	66	SW	.....	.....	3	.....	10	.....	SW	0	0	Covered	C. Saillard.
Beaumette, (near Angers)	.....	.....	29.99	761.7	47.1	8.4	94	NW	6.6	2.9	.....	.....	10	.....	W	0.122	3.1	Raining	Beaumette Observ'tory.
Beauvais	.....	.....	29.93	760.3	46.9	8.3	65	NW	.....	.....	2	.....	10	.....	NW	0	0	Covered	Normal School.
Besançon	.....	.....	30.00	762.0	57.2	14	69	SW	.....	.....	4	.....	2	.....	SW	0	0	Slightly cl'dy	Normal School.
Bourg en Bresse	.....	.....	30.13	765.3	56.8	13.8	67	S	.....	.....	6	.....	6ck	.....	N	0	0	Cloudy	Normal School.
Bourges	.....	.....	29.99	761.7	52.5	11.4	85	SSW	.....	.....	2	.....	5	.....	SW	0	0	Partly cl'dy.	Normal School.
Brest	.....	.....	29.98	761.5	51.6	10.9	62	WNW	.....	.....	3	.....	2	.....	NW	0.030	0.75	Squally	Naval Observatory.
Carcassonne	.....	.....	30.30	769.5	59.4	15.2	68	E	.....	.....	1	.....	2	.....	W	0	0	Slightly cl'dy	Normal School.
Caen	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Chartres	.....	.....	29.86	758.4	44.6	7	88	N	.....	.....	2	.....	10	.....	SSE	0	0	Covered	Normal School.
Châlons-sur-Marne	.....	.....	29.91	759.7	52.2	11.2	75	W	.....	.....	4	.....	10kn	.....	E	0	0	Covered	Normal School.
Clermont	.....	.....	29.96	761.0	62.1	16.7	47	S	.....	.....	3	.....	10	.....	.....	0	0	.....	Puy de Dome Obs'y.
Commercy	.....	.....	30.08	764.0	52.7	11.5	74	WSW	.....	.....	6	.....	5kn	.....	W	0	0	Cloudy	Normal School.
Commune de Gréasque*	.....	.....	30.18	766.6	55.2	12.9	66	SE	.....	.....	2	.....	8	.....	SE	0	0	.....	M. Kina.
Grenoble	.....	.....	30.06	763.4	54.7	12.6	71	NW	.....	.....	1	.....	2ck	.....	.....	0	0	Slightly cl'dy	Normal School.
La Roche-sur-Yon	.....	.....	30.07	763.6	50.0	10.0	70	W	.....	.....	1	.....	5	.....	NW	0	0	Cloudy	Normal School.
Le Mans	.....	.....	29.99	761.7	46.0	7.8	83	NW	.....	.....	4	.....	8	.....	NW	0	0	Very cloudy	Normal School.
Lons-Le-Saulnier	.....	.....	30.00	762.1	56.3	13.5	97	SW	.....	.....	6	.....	5	.....	W	0.874	22.20	Raining	Normal School.
Lorient	.....	.....	30.05	763.3	51.1	10.6	45	WNW	.....	.....	2	.....	2	.....	W	0.146	3.7	Slightly cl'dy	Naval Observatory.
Mâcon	.....	.....	30.13	765.2	55.0	12.8	91	E	.....	.....	1	.....	0	.....	.....	0	0	Clear	Normal School.
Metz	.....	.....	29.98	761.5	48.0	8.9	78	SSW	.....	.....	4	.....	10	.....	.....	0	0	Covered	M. Schuster.
Mirecourt	.....	.....	29.91	759.7	53.4	11.9	76	S	.....	.....	4	.....	1	.....	N	0	0	Fair	Normal School.
Nismes	.....	.....	30.17	766.3	60.8	16	58	SW	.....	.....	1	.....	.n	.....	S	0	0	.....	Normal School.
Orleans	.....	.....	29.93	760.1	47.8	8.8	89	SSW	.....	.....	2	.....	10	.....	SSW	0	0	Covered	Normal School.
Paris, Observatory	.....	.....	29.94	760.4	45.3	7.4	83	WNW	.....	.....	2	.....	10n	.....	NW	.....	.....	Raining	National Observatory.
Parthenay	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Privas	.....	.....	30.14	765.6	53.6	12	76	S	.....	.....	2	.....	10	.....	S	0	0	Covered	Normal School.
Rochefort, Observatory	.....	.....	30.03	762.7	52.9	11.6	86	S	.....	.....	2	.....	10	.....	N	0	0	Covered	Naval Observatory.
Rouen	.....	.....	29.92	760.0	49.3	9.6	71	WSW	.....	.....	2	.....	5	.....	SW	0.004	0.1	Cloudy	Normal School.
Saint Lo	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Tarbes	28.94	735.1	30.01	762.2	63.3	17.4	52	WSW	.....	.....	2	.....	2	.....	E	0	0.	Slightly cl'dy	Normal School.
Villefranche	.....	.....	30.02	762.4	58.8	14.9	90	SE	.....	.....	3	.....	5	.....	.....	0	0	Cloudy	Normal School.
SUB-SERIES.																			
Fort de France, Martinique	.....	.....	29.93	760.2	79.2	26.2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	L'Abbé Marchési.
Marseilles	.....	.....	30.12	765.1	59.0	15.0	65	S	.....	.....	1	.....	8	.....	.....	.....	.....	Rainy	Marseilles Observatory.
Mont-Louis	24.86	631.4	30.17	766.4	47.8	8.8	49	NE	11.2	5.00	.....	.....	4	.....	S	0	0	.....	—. Falguère.
Montsouris, Paris	.....	.....	29.92	760.0	44.8	7.1	96	WNW	.....	.....	2	.....	10	.....	WNW	0.075	1.9	Raining	Montsouris Observatory
Perpignan	.....	.....	30.09	764.2	57.0	13.9	68	SE	5.6	2.50	.....	.....	9	.....	W	0	0	.....	Dr. Fines.
Pic du Midi, (Summit,) H. P.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. Baylac.
Pic du Midi, (Plantade,) H. P.	22.51	571.7	.....	.....	36.5	2.5	.....	NW	.....	.....	1	.....	3	.....	.....	0	0	Clear	General de Nansouty.
Saint Maur, (near Paris)	.....	.....	29.94	760.4	45.1	7.3	84	NW	.....	.....	1	.....	10	.....	.....	0	0	.....	E. Renou.
Toulouse	.....	.....	30.10	764.4	56.8	13.8	66	SE	.....	.....	4	.....	4	.....	.....	Inap.	Inap.	.....	Toulouse Observatory.
Tours	.....	.....	29.98	761.6	47.5	8.6	92	W	.....	.....	2	.....	10	.....	W	0	0	.....	C. Marquet.
Versailles, (near Paris)	.....	.....	29.94	760.4	45.7	7.6	94	NW	.....	.....	2	.....	10	.....	.....	0.133	3.39	Covered	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai)	.....	.....	30.47	774.0	32.9	0.5	75	S	1.3	0.6	.....	.....	0	.....	.....	0	0	.....	Marc Dechevrens, S. J.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—Generally, the originals give the wind-force by the scale 0 to 7; no distinction between upper and lower clouds, and, in the official series, the amount by the scale 0 to 4 the rain-fall as measured at 7, 8 or 9 a. m., local time; at Clermont, 9 a. m. of the following day; the weather in general terms as published. The elevation of Clermont is 388 meters, or 1,272.9 feet; Commune de Gréasque, 322 meters, or 1,056.4 feet; Tarbes, 308 meters, or 1,010 feet; Mont-Louis, 1,586.40 meters, or 5,204.8 feet; Pic du Midi, (Summit,) 2,877 meters, or 9,439.1 feet; Pic du Midi, Plantade,) 2,366 meters, or 7,762.6 feet. In correcting the Mont-Louis barometric observations for altitude, the constant 135. millimeters has been added. *Bouches-du-Rhône

GERMAN SERIES.

Furnished by the coöperation of Professor Dr. G. Neumayer, Director of the German Naval Observatory, Hamburg.

Bamberg	.....	.....	29.93	760.3	50.0	10.0	83	SW	.....	.....	4	.....	8	SW	.....	0	0	.....	Prof. T. Hoh.
Berlin	.....	.....	29.81	757.1	48.7	9.3	80	SW	.....	.....	1	.....	6	.....	.....	0	0	.....	Prof. Arndt.
Breslau	.....	.....	29.94	760.4	39.9	4.4	80	S	.....	.....	2	.....	3	.....	.....	0.012	0.3	.....	Royal University Obs'y.
Carlsruhe	.....	.....	29.91	759.7	53.2	11.8	80	S	.....	.....	1	.....	10	.....	.....	0	0	.....	A. Senz.
Cassel	.....	.....	29.84	758.0	50.0	10.0	71	SSE	.....	.....	4	.....	5	SW	.....	0	0	.....	Dr. H. Möhl.
Crefeld	.....	.....	29.76	756.0	51.8	11.0	72	SW	.....	.....	4	.....	10	.....	.....	0	0	.....	Director Lose.
Emden	.....	.....	29.70	754.3	44.8	7.1	100	W	.....	.....	6	.....	10	.....	.....	0	0	.....	Prof. Prestel.
Frankfort on the Main	.....	.....	29.96	761.0	52.5	11.4	67	SSW	.....	.....	3	.....	6	.....	.....	0	0	.....	Physical Society.
Friedrichshafen	28.57	725.7	30.02	762.5	49.5	9.7	69	SSW	.....	.....	2	.....	4	.....	.....	0.398	10.1	.....	M. Wilhelm
Hamburg	.....	.....	29.68	753.8	49.6	9.8	79	SW	.....	.....	5	.....	9k,8	.....	.....	0.008	0.2	Squally	Captain F. Hegemann.
Kiel	.....	.....	29.60	751.9	48.0	8.9	88	SW	.....	.....	2	.....	10	.....	.....	0	0	.....	Prof. G. Karsten.
Königsberg, (Prussia)	.....	.....	29.85	758.1	38.5	3.6	96	SW	.....	.....	2	.....	5	.....	.....	0.024	0.6	Snowing	Prof. E. Luther.
Koslin	.....	.....	29.78	756.3	39.7	4.3	.....	S	.....	.....	2	.....	10	.....	.....	0.165	4.2	.....	H. Müller.
Leipsic	.....	.....	29.87	758.6	49.6	9.8	71	WSW	.....	.....	3	.....	9	SW	.....	0	0	.....	Prof. Bruhns.
Memel	.....	.....	29.84	758.0	34.0	1.1	96	SSW	.....	.....	2	.....	10	.....	.....	0.071	1.8	Foggy	Reinbrecht & Skalweit.
Münster	.....	.....	29.74	755.3	51.8	11.0	72	SW	.....	.....	1	.....	4	.....	.....	0.067	1.7	.....	Prof. E. Heis.
Neufahrwasser	.....	.....	29.85	758.2	38.5	3.6	95	SSW	.....	.....	2	.....	10	.....	.....	0	0	Dense fog	A Lothe.
Posen	.....	.....	29.89	759.1	46.0	7.8	75	SW	.....	.....	2	.....	7	.....	.....	Inap.	Inap.	.....	Dr. Magener.
Strassburg, (in Alsace)	.....	.....	29.95	760.6	57.6	14.2	68	SW	.....	.....	2	.....	7	SW	.....	0	0	.....	Dr. Schur.
Stuttgart	.....	.....	29.94	760.4	54.5	12.5	73	NE	.....	.....	1	.....	6	.....	.....	0.110	2.8	.....	Prof. Schoder.
Thorn	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Dr. Hasenbalg.
Treves, (Trier)	.....	.....	29.78	756.5	52.0	11.1	71	SW	.....	.....	7	.....	8	.....	.....	0.146	3.7	.....	Prof. Flesch.
Weissenburg, (Bavaria)	28.42	721.9	29.93	760.2	52.0	11.1	75	WSW	.....	.....	2	.....	9	W	.....	0	0	.....	Dr. von Bebber.
Wustrow, Naval School	.....	.....	29.75	755.6	42.3	5.7	87	S	.....	.....	2	.....	8	.....	.....	0	0	.....	E. F. Schütz.
GERMAN NAVAL SERIES.																			

NOTE.—The elevation of Friedrichshafen is 413.4 meters, or 1,356.3 feet; Weissenburg, 481 meters, or 1,412.6 ft. In the originals the distinction between the amount of upper and lower clouds is not made. It is not always certain that the remarks in the weather column refer to the moment of observation.

GREEK SERIES.

Furnished by the coöperation of Professor Dr. J. F. Julius Schmidt, Director of the Royal Observatory at Athens.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Athens			30.32	770.1	45.9	7.7		NE					k					Clear	

Note.—The originals give the barometer corrected, but not reduced to sea-level; occasionally the kind of clouds; the weather as published. They omit the humidity, wind-force, amount of cloudiness and rain-fall.

INDIAN SERIES.

Furnished by the coöperation of H. F. Blanford, Meteorological Reporter to the Government of India.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Kurrachee																			
Deesa																			
Bombay																			
Poona																			
Lahore																			
Belgaum																			
Bangalore																			
Rorkee																			
Agra																			
Trichinopoly																			
Nagpur																			
Madras																			
Lucknow																			
Allahabad																			
Patna																			
Hazaribagh																			
Cuttack																			
Calcutta (Alipore)																			
Goalpara																			
Chittagong																			
Sibsagar																			
Rangoon																			
Jubbulpore																			

ITALIAN SERIES.

Furnished by the cooperation of His Excellency the Minister of Agriculture, Industry and Commerce, and the respective Observers.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Udine			30.16	766.1	50.9	10.5	50	Calm	0	0			8			0	0		Prof. Giovanni Clodig.
Stelvio	22.13	562.2			26.2	— 3.2		W			6		10			0	0		Signora Ernesta Manfredi.
Valdobbia	22.17	563.0			31.1	— 0.5	90	W			1		10			0	0	Foggy	Ab. Dom. Mongini.
Padua			30.17	766.2	49.8	9.9	71	E	0.7	0.3			10	W		0	0		Prof. Dott. Lorenzoni.
Vicenza			30.17	766.2	50.2	10.1	67	SE	1.8	0.8			7	W		0	0		Conte Alm. Da Schio.
Verona			30.20	767.1	49.8	9.9	82	E			1		10			0	0		Dott. B. Bertoncelli.
Bergamo	28.81	731.7	30.15	765.9	47.8	8.8	66	SSW			1		10			0	0		Prof Trionfini Carlo.
Domodossola			30.15	765.8	48.9	9.4	69	SW			4		10			0	0		Prof. Giuseppe Calza.
Milan			30.20	767.0	49.1	9.5	84	N			1		10	NE		0.48	12.3	Raining	Ab. Gio. Capelli
Pavia			30.18	766.5	46.4	8.0	90	N			1		10			0	0		Prof. Gio. Cantoni.
Moncalieri			30.17	766.3	50.4	10.2	68	ESE	0	0			9	SW		0	0		Prof. P. F. Denza.
Mondovi	28.22	716.7	30.16	766.1	48.6	9.2	64	NW			4		10			0	0		Prof. F. C. Bruno.
Porto Maurizio			30.21	767.2	59.0	15.0	72	SE			2		7	W		0.004	0.1	Light rain	Prof. ... Vassallo.
Genoa			30.17	766.3	57.7	14.3	71	SE	8.1	3.6			10	S		0.594	15.1	Raining	Prof. G. M. Garibaldi.
Piacenza			30.21	767.2	46.2	7.9	89	WNW	0.7	0.3			10			0	0		Dott. G. Manzi.
Parma			30.22	767.6	47.3	8.5	85	SW			2		10			0	0	Foggy	Prof. P. Pigorini.
Florence			30.20	767.1	58.1	14.5	65	W			2		9	S		0	0		Cav. F. Meucci.
Leghorn			30.21	767.2	57.7	14.3	73	S	11.2	5.0			10	SSE		0	0		Prof. P. Monte.
Siena	28.96	735.5	30.18	766.6	56.7	13.7	53	S	11.2	5.0			4	S		0	0		Prof. L. Toscani.
Urbino	28.62	727.0	30.21	767.4	54.0	12.2	59	SW			4		7			0	0		Prof. P. Serpieri.
Pesaro			30.19	766.8	55.0	13.1	59	NE	16.1	7.2			10	SW		0	0		Prof. Luigi Guidi.
Ancona			30.18	766.5	59.4	15.2	56	SE			4		1			0	0		Prof. F. De— Boeis.
Grosseto			30.24	768.1	58.3	14.6	64	SSE			4		4	S		0	0		Avv. P. Ponticelli.
Rome			30.26	768.6	61.7	16.5	42	SE	11.5	5.0			1			0	0		Prof's. P. Secchi & L. Respighi.
Naples, O. U.			30.30	769.7	60.6	15.9	58	SW			2		3	S		0	0		Prof. L. Palmieri.
Lecce			30.34	770.5	52.6	11.4	30	NNW	1.3	0.6			0			0	0		Prof. C. De—Giorgi.
Cosenza			30.35	770.8	56.3	13.5	57	SE	1.3	0.6			0			0	0		Prof. F. D. Conti.
Cagliari			30.13	765.4	61.3	16.3	70	S			4		2	W		0	0		Prof. A. Pacinotti.
Ilposto, (Sicily)			30.26	768.6	58.6	14.8	67	SE			2		2			0	0		Pref. F. Cuffero.
Palermo			30.24	768.2	57.9	14.4	58	ENE	3.1	1.4			0			0	0		Prof. G. Cacciatore.
Caltanissetta	28.32	719.2	30.32	769.6	55.0	12.8	58	S			2		7	W		0	0		Prof. A. Pagani.
Siracusa			30.35	771.0	58.3	14.6	60	SE			2		4	SW		0	0		Prof. V. Giuliano.
Sub-Series.																			
Naples, S. R.			30.32	770.2	56.8	13.8	65	NE	0.7	0.3			2	E		0	0		Prof. F. Brioschi.

Note.—The originals give the wind-force by the scale 0 to 4, or the velocity in kilometers per hour; generally, no distinction between upper and lower clouds, occasionally the weather by the Vienna symbols. The elevation of Stelvio is 2,543.0 meters, or 8,342.9 feet; Valdobbia, 2,548.0 meters or 8,359.3 feet; Bergamo, 379.6 meters, or 1,24 3 feet; Mondovi, 556 meters, or 1,824.2 feet; Siena, 348.5 meters, or 1,143.3 feet; Urbino, 451 meters, or 1,47e.7 feet; Caltanissetta, 570.3 meters, or 1,871.0 feet.

JAPANESE SERIES.

Furnished by the coöperation of the Imperial University of Tokei, Japan.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Tokei																			Prof. P. V. Veeder.

Note.—The originals give the amount of cloudiness by the scale 0 to 4 without distinguishing between upper and lower clouds. The rain-fall is measured at 7 a. m., cal time.

By authority of the SECRETARY OF PUBLIC WORKS.

MEXICAN SERIES.

Furnished by the coöperation of Señor Mariano Barcena, Director of the Central Meteorological Observatory in the City of Mexico.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Up er. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Mexico																			Mariano Barcena.
																			Vicente Reyes.
																			Miguel Perez.

(Engineers in charge.)

NOTE.—The elevation of Mexico is 2,200 meters, or 7,512.9 feet. The rain-fall is measured at 6 a. m., local time.

NETHERLANDS' SERIES.

Furnished by the cooperation of Professor Buys Ballot, Director of the Royal Meteorological Institute of the Netherlands at Utrecht.

Flushing			29.83	757.7	44.6	7.0		WNW			5					0.028	0.7		
Groningen			29.61	752.0	45.7	7.6										0.020	0.5		
Helder			29.69	754.0	44.2	6.8		W			4					0.079	2.0		
Utrecht			29.70	754.4	45.1	7.3	90	WNW			4		8			0.071	1.8	Very cloudy.	

NOTE.—The originals give the wind-pressure in kilograms per square meter; for Utrecht, they give the weather as published, from which the amount of cloudiness is taken by the scale 0 to 4, without distinguishing between upper and lower clouds. It is assumed that the barometer readings have been reduced to sea-level.

NORWEGIAN SERIES.

Furnished by the cooperation of Professor H. Mohn, Director of the Royal Norwegian Meteorological Institute at Christiania.

Bergen			29.28	743.7	39.6	4.2	77	S	11.2	5.1			7			0	0		
Brönö			29.47	748.5	21.8	— 5.6	82	ENE	33.6	15			10			0	0		
Christiania			29.39	746.4	36.0	2.2	96	ENE	7.4	3.3			10			0.150	3.8	Raining.	
Tromsö			29.75	755.6	14.0	—10.0	87	Calm	0	0			0			0	0		

NOTE.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols. The cloudiness and weather at Bergen refer to 2h., p. m., local time, instead of 1h., 4 min.

PORTUGUESE SERIES.

Furnished by the coöperation of J. C. de Brito Capello, Director of the Meteorological Observatory of the Infante Don. Luiz at Lisbon.

Angra, (Azores)			30.33	770.4	54.3	12.4	83	SSW	4.3	1.9			8			0	0		Dr. J. A. Sampaio.
Campo Major			29.97	761.1	56.3	13.5	54	NNE	7.4	3.3			7	SSW		0	0		Dr. A. M. R. dos Santos.
Funchal, (Madeira)			30.14	765.5	59.5	15.3	62	WNW	4.9	2.2			8			0.197	5.0	Light rain	Capt. D. A. de Cunha.
Lisbon			29.91	759.8	57.0	13.9	77	SE	8.7	3.9			8	SSE		1.165	29.6		The Observatory.
Ponta Delgada, (Azores)			30.38	771.7	57.6	14.2	65	ESE					3			0	0		

NOTE.—The originals give the wind-velocity in kilometers per hour; occasionally, the weather by the Vienna symbols; the amount of cloudiness without distinguishing between upper and lower clouds; the barometer corrected but not reduced to sea-level. The rain-fall at Lisbon is measured at noon, instead of 0 h. 6 m., p. m.

RUSSIAN SERIES.

Furnished by the cooperation of Professor H. Wild, Director of the Imperial Central Physical Observatory of Russia, at St. Petersburg.

Warsaw			29.97	761.1	37.4	3.0	83	SSW	9	4			8						Astronomical Obs.
Wilna			29.80	758.4	33.4	0.8	93	SW	2	1			10						Astronomical Obs.
Dorpat			29.82	757.3	23.4	— 4.8	92	ENE	4	2			10					Snowing	Physical Cabinet.
St. Petersburg			29.87	758.7	5.9	—14.5	84	NE	0	0			2						Central Physical Obs.
Kuopio			29.96	761.0	0.9	—17.3	89	NE	7	3			0						Ch. Forsten.
Kieff			30.15	765.8	16.7	— 8.5	73	SSW	16	7			10						Physical Cabinet.
Nikolaiev			30.34	770.5	21.0	— 6.1	66	NE	7	3			0						Kurdakof.
Kerteh			30.28	769.1	18.9	— 7.3	81	NNE	16	7			7						Lagorio.
Moscow			29.89	759.3	13.8	—10.1	76	S	18	8			10					Snowing	Meteorological Obs.
Lugan			30.37	771.5	1.6	—16.9	75	Calm	0	0			0						Meteorological Obs.
Archangel			29.89	759.2	—10.8	—23.8	92	Calm	0	0			10						Ogorodnikof.
Tiflis	28.60	726.3	30.07	763.6	38.3	3.5	82	Calm	0	0			10						Physical Observatory.
Astrakhan			30.32	770.1	15.4	— 9.2	94	N	4	2			10			Blank	Blank		Sebastianof.
Kasan			30.16	766.0	— 4.5	—20.3	83	SE	7	3			8						Physical Cabinet.
Orenburg			29.58	751.4	34.7	1.5	91	E	13	6			10						Tschernischef.
Ekaterinburg	28.97	735.8	30.01	762.2	4.5	—15.3	77	SW	11	5			0						Meteorological Obs.
Nukuss			30.05	763.2	65.7	18.7	35	ESE	4	2			8						
Kasaly																			Bobrof.
Tashkend																			Michelson.
Barnaul			30.63	778.0	11.1	—11.6	60	SE	0	0			1						Meteorological Obs.
Yeniseisk			30.28	769.0	13.5	—10.3	80	ESE	9	4			10						Marks.
Irkutsk																			Usolzef.
Peking, (China)			30.41	772.4	23.9	— 4.5	49	NNW	25	11			0						Physical Observatory.
Nertchinsk																			Meteorological Obs.
Vladivostock																			
Nikolaievsk, on the Amoor																			

NOTE.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols; they omit the rain-fall. The elevation of Tiflis is 409 meters, or 1,341.8 feet; Ekaterinburg, 306.4? m., or 1,005.2? ft.; Tashkend, 494.2? m., or 1,621.3? ft.; Irkutsk, 392 m., or 1,286 ft.; Nertchinsk, 592.0? m., or 1,942.2? ft.

SPANISH SERIES.

Furnished by the cooperation of Antonio Aguilar, Director of the Royal Observatory at Madrid, and of Don Cecilio Pujazon, Captain R. N. Director of the Naval Observatory at San Fernando.

Madrid			30.02	762.5	61.9	16.6	33	N	6.0	2.67		2	1	NE		0	0	Partly cl'dy	Royal Observatory.
San Fernando			29.96	761.0	61.3	16.3	74	S	6.5	2.9		0	10		S	Inap.	Inap.		Naval Observatory.

NOTE.—The originals give the weather in general terms, as published; rain-fall for San Fernando from preceding to following midnight; wind-velocity for Madrid in kilometers per hour.

SWEDISH SERIES.

Furnished by the coöperation of Professor R. Rubenson, Director of the Royal Swedish Meteorological Institute, at Stockholm, and of Dr. H. H. Hildebrandsson, Chief of the Meteorological Division of the Upsala Observatory.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Upper 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Haparanda	.....	.....	30.04	763.0	—13.7	—25.4	.....	N	.....	.....	2	.....	0	.....	.....	0	0	.....	
Umea	.....	.....	30.00	762.0	— 3.3	—19.6	75	NE	.....	.....	2	.....	8	.....	.....	0.043	1.1	.....	
Hernosand	.....	.....	29.90	759.4	— 1.1	—18.4	100	ENE	.....	.....	4	.....	10	.....	.....	.....	.....	Snowing	
Stockholm	.....	.....	29.61	752.0	28.4	— 2.0	96	ENE	.....	.....	4	.....	10	.....	.....	0.087	2.2	.....	
Wisby	.....	.....	29.68	753.9	35.6	2.0	93	SW	.....	.....	4	.....	10	.....	.....	0.051	1.3	.....	
Sub-Series.																			
Upsala	.....	.....	29.65	753.2	18.1	— 7.7	95	NE	7.2	3.2	.....	.....	10	.....	.....	0.567	14.40	Snowing	Dr. Hildebrandsson.

Note.—The originals give the wind-force by the scale 0 to 6, and Upsala also velocity in meters per second; occasionally, the weather by the Vienna symbols, or in general terms; no distinction between the amount of upper and lower clouds. The rain-fall is measured at 8 a. m., local time.

SWISS SERIES.

Furnished by the coöperation of Professor R. Wolf, Director of the Observatory at Zurich, and of Professor E. Plantamour, Director of the Observatory at Geneva.

Geneva	28.60	726.5	30.02	762.5	57.6	14.2	57	SSW	.....	.....	5	.....	4c	.....	.....	0	0	.....	The Observatory.
Zurich	28.39	721.0	30.02	762.6	53.6	12.0	70	W	.....	.....	2	.....	3	.....	.....	0.039	1.0	Fair	The Observatory.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Note.—For Geneva the corresponding departures from the normal values are: Barometer, +0.3 mm; Thermometer, +10.4 cent.; Relative Humidity, —14 per cent.

Note.—The rain-fall is measured at Zurich at 7 a. m. on the following day. The originals give the barometer corrected but not reduced to sea-level; the wind-force by the scale 0 to 4 for Zurich; the amount of cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The elevation of Geneva is 408 meters, or 1,339 feet, and that of Zurich 470 meters, or 1,542 feet.

TURKISH SERIES.

Furnished by the cooperation of A. Coumbary, Effendi, Director of the Central Observatory at Constantinople, and of Professor C. V. A. Van Dyck, Superintendent of the Lee Observatory at Beirut.

Constantinople	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Fao, (Persian Gulf)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Salonica	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Valond	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Varna	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y	.....	.....	29.69	754.0	55.9	13.3	65	SW	.....	.....	6	.....	7n	.....	SW	1.08	27.4	Squally	Prof. C. V. A. Van Dyck.

Note.—The originals give the wind-force by the scale 0 to 7, (except Beirut, by the scale 0 to 12, and Constantinople velocity in meters per second;) the weather in general terms as published; no distinction between upper and lower clouds, and, except Constantinople and Beirut, the amount by the scale 0 to 4. It is assumed that the barometer is reduced to sea-level.

CANADIAN SERIES.

Furnished by the cooperation of Professor G. T. Kingston, Director of the Magnetic Observatory at Toronto, and Superintendent of the Meteorological Office of the Dominion of Canada, and the respective Observers. Those marked with a star (*) are also telegraphed daily to the office of the Chief Signal Officer, U. S. Army.

Bathurst, N. B	.....	.....	30.01	762.2	13.2	—10.4	80	Calm	0	0	.....	.....	.....	.....	.....	.....	.....	Fine	Hon. J. Ferguson.
Brockville, Ontario	.....	.....	29.95	760.7	33	0.6	.....	SW	3	1.3	.....	.....	10s	.....	SW	0.01	0.3	Light snow	W. R. Bigg.
*Chatham, N. B	.....	.....	30.01	762.2	— 3	—10.1	100	Calm	0	0	.....	2k	0	.....	.....	0	0	Fair	G. A. Blair.
Charlottetown, P. E. Island	.....	.....	30.03	762.7	20	— 6.7	94	Calm	0	0	.....	.....	10ks	.....	.....	0	0	Cloudy	H. J. Cundall, C. E.
Cornwall, Ontario	.....	.....	29.90	759.4	33.9	1.1	75	SW	.....	.....	1	.....	10s	.....	.....	0.02	0.5	Dull	James Smith, M. A.
Dalhousie, N. B	.....	.....	30.02	762.5	14.9	— 9.5	96	W	.....	.....	1	.....	.....	.....	.....	0	0	Overcast	H. A. Johnson.
Esquimault, B. C	.....	.....	30.22	767.6	36.1	2.3	81	N	.....	.....	.....	0	0	.....	.....	0	0	Clear	W. H. Bevis.
*Father Point, Quebec	.....	.....	29.96	761.0	21	— 6.1	74	S	2	0.9	.....	5k	2s	S	S	0	0	Cloudy	J. McWilliams.
Fredericton, N. B	.....	.....	30.09	764.3	1.6	—16.9	86	Calm	0	0	.....	10cs	0	.....	.....	0	0	Cloudy	Prof. Harrison.
*Fort Garry, Manitoba	.....	.....	30.48	774.2	—12	—24.4	95	NW	6	2.7	.....	0	2ks	.....	NW	0	0	Fair	James Stewart.
Goderich, Ontario	.....	.....	29.99	761.7	33.4	0.8	97	W	.....	.....	3	4k	3n	W	.....	0.05	1.3	Unsettled	H. J. Strang, M. A.
Granton, Ontario	28.85	732.8	29.98	761.5	33.1	0.6	.....	W	.....	.....	1	.....	10n	.....	.....	0	0	Cloudy	James Grant.
*Halifax, N. S	.....	.....	30.03	762.7	29	— 1.7	91	W	3	1.3	.....	2cs	8ks	W	W	0	0	Cloudy	E. Allison, M. A.
Hamilton, Ontario	.....	.....	30.01	762.2	37.7	3.2	70	SW	.....	.....	4	10cs	0	.....	.....	0	0	Cloudy	G. Dickson.
Heart's Content, N. F	.....	.....	29.86	758.4	31	— 0.6	89	SW	.....	.....	4	4k	0	SW	.....	0	0	Cloudy	E. Weedon.
*Kingston, Ontario	.....	.....	29.96	761.0	35	1.7	73	SW	2	0.9	.....	.....	10n	.....	SW	0.02	0.5	Light rain	S. Woods, M. A.
*Montreal, Quebec	.....	.....	29.94	760.5	30	— 1.1	97	SW	12	5.4	.....	.....	10n	.....	SE	0.01	0.3	Light snow	C. H. McLeod, C. E.
*Ottawa, Ontario	.....	.....	29.91	759.7	32	0.1	70	SE	4	1.8	.....	.....	10n	.....	SE	0.22	5.6	Threatening	J. B. Haney.
*Parry Sound, Ontario	.....	.....	29.84	757.9	33	0.6	89	SW	17	7.6	.....	2k	8ks	SW	SW	0.08	2.0	Cloudy	Rev. R. Mosley.
Port Dover, Ontario	.....	.....	30.02	762.5	36	2.2	80	SW	9	4.0	.....	10k	0	SW	.....	Inap.	Inap.	Cloudy	H. Morgan.
Port Hastings, N. S	.....	.....	30.04	763.0	26.7	— 2.9	.....	Calm	0	0	.....	.....	.....	.....	.....	0	0	Fine	Peter Grant.
Port Stanley, Ontario	.....	.....	30.06	763.5	36	2.2	73	W	18	8.0	.....	.....	10ks	.....	W	0.01	0.3	Cloudy	M. Payne.
*Quebec, Quebec	.....	.....	29.96	761.0	24	— 4.4	87	Calm	0	0	.....	.....	10n	.....	.....	0.02	0.5	Cloudy	Capt. Ashe, R. N.
*Rockliffe, Ontario	.....	.....	29.81	757.2	24	— 4.4	98	E	2	0.9	.....	.....	5s	.....	SW	Inap.	Inap.	Light snow	
St. John, N. B	.....	.....	30.09	764.3	27	— 2.8	76	SW	1	0.4	.....	7ks	0	.....	.....	0	0	Fair	G. Murdoch, C. E.
*Saugeen, Ontario	.....	.....	29.88	758.9	33	0.6	89	SW	13	5.8	.....	5k	0	.....	.....	0.02	0.5	Fair	K. Stewart.
Stayner, Ontario	.....	.....	29.89	759.2	35	1.7	71	NW	11	4.9	.....	.....	8n	.....	NW	Inap	Inap.	Cloudy	R. J. Cole.
Stratford, Ontario	28.64	727.4	29.96	761.0	32.7	0.4	85	W	27	12.1	.....	.....	10ks	.....	.....	0	0	Cloudy	C. J. MacGregor, M. A.
*Sydney, C. B	.....	.....	30.06	763.5	23	— 5.0	81	SW	8	3.6	.....	8ck	0	NW	.....	0	0	Fair	T. C. Hill.
*Toronto, Ontario	.....	.....	29.97	761.2	36	2.2	74	SW	13	5.8	.....	.....	10n	.....	W	0	0	Cloudy	Magnetic Observatory.
Woodstock, Ontario	.....	.....	30.00	762.0	34.5	1.4	86	SW	12	5.4	.....	.....	10s	.....	.....	0	0	Cloudy	J. Montgomery.
Sub-Series.																			
St. Johns, Newfoundland	.....	.....	29.97	761.2	16.0	— 8.9	.....	W	13	5.8	.....	Sm'c	10s	.....	.....	0	0	Fair	John Delany.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Note.—The originals for Brockville, Charlottetown, Port Dover, Port Stanley, Stayner, St. Johns, N. F. and those telegraphed, give the amount of cloudiness by the scale 0 to 4. The elevation of Granton is 1,015 feet, or 309.4 m.; Stratford, 1,182 feet, or 360.3 m

UNITED STATES SERIES.

Furnished by the cooperation of Bvt. Brig. Gen. Albert J. Myer, Chief Signal Officer, U. S. Army.

STATIONS.	Barometer: Corrected for instrum'tal error and temperature. Inches.	Barometer: Corrected for instrum'tal error and temperature. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather	Observer.
Albany, N. Y.	.....	.....	30.07	763.8	36	2.2	80	C lm	0	0	.....	.....	10s	.....	.....	0	0	Cloudy	
Alpena, Mich.	.....	.....	29.93	760.2	28	— 2.2	77	NW	22	9.8	.....	0	2ks	.....	NW	0	0	Fair	
Atlantic City, N. J.	.....	.....	30.20	767.1	36	2.2	90	SW	7	3.1	.....	.....	10ks	.....	W	0	0	Cloudy	
Augusta, Ga.	.....	.....	30.23	767.8	41	5.0	91	NW	4	1.8	.....	.....	10n	.....	NW	0.40	10.2	Light rain	
Baltimore, Md.	.....	.....	30.20	767.1	37	2.8	80	Calm	0	0	.....	5k	5s	.....	.....	0	0	Cloudy	
Barnegat, N. J.	.....	.....	30.19	766.8	34	1.1	90	SW	6	2.7	.....	10k	0	W	.....	0	0	Cloudy	
Bismarck, Dakota	28.60	723.9	30.32	770.1	10	— 12.2	69	NE	2	0.9	.....	0	0	.....	.....	0	0	Clear	
Boston, Mass.	.....	.....	30.11	764.8	35	1.7	61	SW	8	3.6	.....	2cs	8s,sme'	.....	SW	0	0	Cloudy	
Breckenridge, Minn.	.....	.....	30.45	773.4	3	—16.1	73	W	12	5 4	.....	0	0	.....	.....	Inap.	Inap.	Clear	
Buffalo, N. Y.	.....	.....	29.99	761.7	36	2.2	80	W	16	7 2	.....	.....	10s	.....	SW	0.08	2.0	Cloudy	
Burlington, Vt.	.....	.....	29.99	761.7	35	1.7	70	S	4	1.8	.....	.....	10s	.....	.....	0	0	Cloudy	
Cairo, Ill.	.....	.....	30.32	770.4	44	6.7	75	N	8	3.6	.....	.....	10s	.....	NW	0	0	Cloudy	
Cape Hatteras, N. C.	.....	.....	30.14	765.5	48	8.9	92	NE	4	1.8	.....	.....	10n,fg	.....	.....	0.11	2.8	Light rain	
Cape Henry, Va.	.....	.....	30.23	767.8	39	3.9	91	Calm	0	0	.....	8ck	0	SW	.....	0	0	Fair	
Cape Lookout, N. C.	.....	.....	30.17	766.3	45	7.2	100	NE	8	3.6	.....	.....	10n	.....	NE	0.21	5.3	Light rain	
Cape May, N. J.	.....	.....	30.20	767.1	39	3.9	81	S	12	5.4	.....	5ck	0	W	.....	0	0	Fair	
Charleston, S. C.	.....	.....	30.11	764.8	51	10.6	100	N	12	5.4	.....	.....	10n	.....	.....	0.83	21.1	Light rain	
Cheyenne, Wyoming	24.23	615.4	30.17	766.3	26	— 3.3	88	SW	8	3.6	.....	2ck	5s	SW	SW	Inap.	Inap.	Cloudy	
Chicago, Ill.	.....	.....	30.24	768.1	20	— 1.7	59	NW	13	5.8	.....	1cs	0	W	.....	0	0	Clear	
Cincinnati, Ohio	.....	.....	30.17	766.3	40	4.4	82	W	4	1.8	.....	.....	10s	.....	.....	Inap.	Inap.	Cloudy	
Cleveland, Ohio	.....	.....	30.13	765.3	35.5	1.9	80	SW	10	4.5	.....	.....	10s	.....	SW	0	0	Cloudy	
Corsicana, Tex.	.....	.....	30.39	771.9	45	7.2	84	N	6	2.7	.....	.....	10s	.....	.....	0	0	Cloudy	
Davenport, Iowa	.....	.....	30.43	772.9	28	— 2.2	67	NW	6	2.7	.....	4cs	0	NW	.....	0	0	Fair	
Denison, Tex.	.....	.....	30.45	773.4	42	5.6	83	N	5	2.2	.....	.....	10s	.....	N	0	0	Cloudy	
Denver, Col.	25.04	636.0	30.26	768.6	21	— 6.1	85	S	2	0.9	.....	0	0	.....	.....	0.10	2.5	Clear	
Detroit, Mich.	.....	.....	30.05	763.3	36	2.2	70	SW	12	5.4	.....	10k	0	W	.....	0	0	Cloudy	
Dodge City, Kan.	27.79	705.8	30.25	768.3	27	— 2.8	88	NE	10	4.5	.....	.....	10s	.....	NE	0	0	Cloudy	
Dubuque, Iowa	.....	.....	30.40	772.1	23	— 5.0	73	NW	4	1.8	.....	0	0	.....	.....	Inap.	Inap.	Clear	
Duluth, Minn.	.....	.....	30.22	767.6	17	— 8.3	67	W	10	4.5	.....	0	0	.....	.....	0.04	1.0	Clear	
Eastport, Me.	.....	.....	30.07	763.8	30	— 1.1	79	Calm	0	0	.....	2c	Haz'	W	.....	0	0	Fair	
Erie, Pa.	.....	.....	30.05	763.3	37	2.8	71	SW	22	9.8	.....	.....	10s	.....	W	0	0	Cloudy	
Escanaba, Mich.	.....	.....	30.04	763.0	20	— 6.7	70	NW	20	8.9	.....	0	0	.....	.....	0.02	0.5	Clear	
Fort Gibson, Indian Ter.	.....	.....	30.39	771.9	40	4.4	82	N	8	3.6	.....	.....	10s	.....	N	0	0	Cloudy	
Ft. St. Michael, Alaska	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Fort Sill, Indian Ter.	29.20	741.7	30.37	771.4	41	5.0	93	Calm	0	0	.....	5ck	0	W	.....	0	0	Fair	
Fort Sully, Dakota	28.04	727.4	30.45	773.4	19	— 7.2	69	NW	2	0.9	.....	0	0	.....	.....	0	0	Clear	
Florence, Arizona	28.54	724.9	30.06	763.5	57	13.9	.....	SW	.....	.....	.....	0	0	.....	.....	0	0	Clear	
Galveston, Tex.	.....	.....	30.35	770.9	49	9.4	85	N	16	7.2	.....	.....	10s	.....	NE	0	0	Cloudy	
Grand Haven, Mich.	.....	.....	30.13	765.3	30	— 1.1	65	NW	32	14.3	.....	1c	0	W	.....	0	0	Clear	
Indianapolis, Ind.	.....	.....	30.24	768.1	38	3.3	71	W	5	2.2	.....	.....	10s	.....	NW	0	0	Cloudy	
Indianola, Tex.	.....	.....	30.44	773.2	51	10.6	79	NE	20	8.9	.....	.....	10s	.....	.....	0	0	Cloudy	
Jacksonville, Fla.	.....	.....	30.19	766.8	47	8.3	91	NW	4	1.8	.....	.....	10s	.....	NW	Inap.	Inap.	Cloudy	
Keokuk, Iowa	.....	.....	30.40	772.1	28	— 2.2	77	N	10	4.5	.....	0	0	.....	.....	0	0	Clear	
Key West, Fla.	.....	.....	30.15	765.8	69	20.6	84	SE	8	3.6	.....	8cs	0	.....	.....	0	0	Cloudy	
Kittyhawk, N. C.	.....	.....	30.22	767.6	42	5.6	91	Calm	0	0	.....	.....	10s	.....	.....	0	0	Cloudy	
Knoxville, Tenn.	.....	.....	30.25	768.3	44	6.7	84	S	2	0.9	.....	.....	n	.....	.....	0.01	0.3	Misting	
La Crosse, Wis.	.....	.....	30.35	770.9	22	— 5.6	59	W	6	2.7	.....	0	0	.....	.....	0.03	0.8	Clear	
Leavenworth, Kan.	.....	.....	30.48	774.2	30	— 1.1	68	N	6	2.7	.....	0	0	.....	.....	Inap	Inap.	Clear	
Louisville, Ky.	.....	.....	30.23	767.8	41	5.0	83	SW	2	0.9	.....	.....	8s, fg	.....	SW	0	0	Cloudy	
Lynchburg, Va.	.....	.....	30.21	767.3	35	1.7	61	Calm	0	0	.....	10k	0	W	.....	0	0	Cloudy	
Malone, N. Y.	.....	.....	29.89	759.2	37	2.8	80	S	8	3.6	.....	.....	10s	.....	.....	0	0	Cloudy	
Marquette, Mich.	.....	.....	29.96	761.0	20	— 6.7	70	W	24	10.7	.....	.....	8s	.....	NW	0	0	Cloudy	
Memphis, Tenn.	.....	.....	30.35	770.9	44	6.7	83	NW	4	1.8	.....	.....	10s	.....	.....	0	0	Cloudy	
Milwaukee, Wis.	.....	.....	30.27	768.8	24	— 4.4	48	NW	20	8.9	.....	0	0	.....	.....	0	0	Clear	
Mobile Ala.	.....	.....	30.29	769.4	43	6.1	91	N	12	5.4	.....	.....	10s	.....	.....	Inap.	Inap.	Cloudy	
Montgomery, Ala.	.....	.....	30.29	769.4	44	6.7	84	N	4	1.8	.....	.....	10s	.....	.....	0	0	Cloudy	
Morgantown, W. Va.	29.09	738.9	30.18	766.6	38	3.3	71	SW	4	1.8	.....	.....	10s	.....	SW	0	0	Cloudy	
Mt. Washington, N. H.	23.52	597.4	29.88	758.9	15	— 9.4	100	NW	24	10.7	.....	.....	Fog	.....	.....	0.04	1.0	Foggy	
Nashville, Tenn.	.....	.....	30.29	769.4	45	7.2	84	SW	3	1.3	.....	.....	10s	.....	.....	0	0	Cloudy	
New Haven, Conn.	.....	.....	30.13	765.3	38	3.3	80	Calm	0	0	.....	.....	10s, fg	.....	.....	0	0	Cloudy	
New London, Conn.	.....	.....	30.15	765.8	36	2.2	80	SW	9	4.0	.....	.....	10s	.....	W	0	0	Cloudy	
New Orleans, La.	.....	.....	30.29	769.4	47	8.3	77	N	8	3.6	.....	.....	10s	.....	N	0	0	Cloudy	
Newport, R. I.	.....	.....	30.14	765.5	36	2.2	90	SW	15	6.7	.....	.....	10ks	.....	W	0	0	Threatening	
New York, N. Y.	.....	.....	30.18	766.6	33	0.6	79	SW	8	3.6	.....	2k	8ks	SW	SW	0	0	Cloudy	
Norfolk, Va.	.....	.....	30.24	768.1	42	5.6	83	Calm	0	0	.....	8k	Fog	W	.....	0	0	Fair	
North Platte, Neb.	27.48	698.0	30.27	768.8	22	— 5.6	85	W	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Omaha, Neb.	29.32	744.7	30.50	774.7	24	— 4.4	74	N	1	0.4	.....	0	0	.....	.....	0	0	Clear	
Oswego, N. Y.	.....	.....	29.98	761.5	41	5.0	60	S	9	4.0	.....	.....	10s	.....	W	0.10	2.5	Threatening	
Pembina, Dakota	.....	.....	30.46	773.7	— 7	—21.7	80	NW	6	2.7	.....	0	0	.....	.....	0	0	Clear	
Philadelphia, Pa.	.....	.....	30.21	767.3	34	1.1	79	W	8	3.6	.....	10k	Sm'k	W	.....	0	0	Cloudy	
Pike's Peak, Col.	17.74	450.6	29.95	760.7	- 4.5	—15.3	87	W	8	3.6	.....	0	8ks	.....	.....	0.12	3.0	Clear	
Pittsburgh, Pa.	.....	.....	30.11	764.8	41	5.0	65	SW	11	4.9	.....	.....	10s	.....	SW	0	0	Cloudy	
Port Huron, Mich.	.....	.....	29.98	761.5	36	2.2	62	SW	12	5.4	.....	.....	10s	.....	W	0	0	Cloudy	
Portland, Me.	.....	.....	30.04	763.0	36	2.2	61	SW	4	1.8	.....	.....	10s	.....	.....	0	0	Cloudy	
Portland, Oregon	.....	.....	30.24	768.1	41	5.0	65	NE	2	0.9	.....	0	0	.....	.....	0	0	Clear	
Punta Rassa, Fla.	.....	.....	30.16	766.1	64.0	17.8	94	E	3	1.3	.....	.....	10s	.....	SE	0	0	Cloudy	
Rochester, N. Y.	.....	.....	29.95	760.7	39	3.9	72	W	9	4.0	.....	.....	10s	.....	W	Inap.	Inap.	Cloudy	
Salt Lake City, Utah	25.90	657.8	30.23	767.8	27	— 2.8	88	NW	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Sandy Hook, N. J.	.....	.....	30.18	766.6	37	2.8	80	SW	12	5.4	.....	.....	10ks	.....	SW	0	0	Cloudy	
San Diego, Cal.	.....	.....	30.05	763.3	56	13.3	87	SE	2	0.9	.....	.....	10s	.....	SE	0	0	Cloudy	
San Francisco, Cal.	.....	.....	30.06	763.5	49	9.4	89	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Santa Fé, N. M.	23.38	593.8	29.92	760.0	28	— 2.2	77	N	7	3.1	.....	0	5s	.....	.....	0.05	1.3	Fair	
Savannah, Ga.	.....	.....	30.19	766.8	46	7.2	92	NW	6	2.7	.....	.....	Fog	.....	.....	0.01	0.3	Foggy	
Shreveport, La.	.....	.....	30.43	772.9	45	7.2	92	N	4	1.8	.....	.....	10s	.....	.....	0	0	Cloudy	
Smithville, N. C.	.....	.....	30.16	765.8	48	8.9	92	NE	16	7.2	.....	.....	10n	.....	NE	0.31	7.9	Light rain	
Springfield, Mass.	.....	.....	30.11	764.8	35.5	1.9	65	S	4	1.8	.....	5c	5s	SW	S	0	0	Cloudy	
St. Louis, Mo.	.....	.....	30.39	771.9	40	4.4	84	N	12	5.4	.....	.....	10s	.....	.....	0	0	Cloudy	
St. Marks, Fla.	.....	.....	30.22	767.6	44	6.7	100	N	5	2.2	.....	.....	10s	.....	.....	0.13	3.3	Cloudy	
St. Paul, Minn.	.....	.....	30.33	770.4	19	— 7.2	69	SW	5	2.2	.....	0	2s	.....	.....	0.01	0.3	Fair	
St. Paul's Island, Alaska	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Thatcher's Island, Mass.	.....	.....	30.09	764.3	36	2.2	62	SW	12	5.4	.....	.....	10s	.....	W	0	0	Cloudy	
Toledo, Ohio	.....	.....	30.10	764.5	39	3.9	72	W	12	5.4	.....	5k	2ks	W	W	0	0	Fair	
Tucson, Arizona	27.59	700.8	30.14	765.5	38	3.3	.....	S	.....	.....	.....	5c	0	SW	.....	0	0	Cloudy	
Tybee Island, Ga.	.....	.....	30.14	765.5	44	6.7	100	W	12	5.4	.....	.....	Fog	.....	.....	0.30	7.6	Foggy	
Vicksburg, Miss.	.....	.....	30.39	771.9	44	6 7	88	Calm	0	0	.....	.....	10s,sm	.....	.....	0	0	Cloudy	
Virginia City, M. T.	24.60	622.3	29.98	761.5	15	— 9.4	57	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Washington, D. C.	.....	.....	30.20	767.1	35	1.7	76	S	2	0.9	.....	0	5s,sm'	.....	SW,S	0	0	Fair	
Wilmington, N. C.	.....	.....	30.14	765.5	48	8.9	92	NE	8	3.6	.....	.....	10n	.....	SE	0.15	3.8	Light rain	

UNITED STATES SERIES.—Continued.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Upper. 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Wood's Holl, Mass	.....	.....	30.17	766.3	39	3.9	72	SW	8	3.6	.....	2cs	5ks	SW	SW	0	0	Cloudy	
Yankton, Dakota	29.16	740.7	30.58	776.7	17	— 8.3	67	SW	2	0.9	.....	0	0	.....	.....	0	0	Clear	
Yuma, Arizona	.....	.....	30.06	763.5	59	15.0	.....	N	.....	.....	.....	0	0	.....	.....	0	0	Clear	
Sub-Series.																			
Kingston, Jamaica, W. I.	.....	.....	30.25	768.3	74	23.3	76	N	4	1.8	.....	2c	0	.....	.....	0	0	.....	James Gall.
Navassa, W. I.	.....	.....	.....	.....	76	24.4	.....	ENE	.....	.....	3	.....	.....	.....	.....	0	0	.....	Dr. G. H. Davison
Clifton, Ja., W. I.	27.23	691.6	30.05	763.3	64	17.8	83	N	1.0	0.4	.....	0	0	.....	.....	0.28	7.1	Fine	C. Partridge.
Paramaribo, D. Guiana, S. A.	.....	.....	30.03	762.7	81	27.2	83	E	.....	.....	4	5k	7ks	E	.....	0	0	⅔ cloudy	C. J. Hering.
Batavia, Dutch Guiana, S. A.	30.07	763.7	.....	.....	79.7	26.5	.....	N	.....	.....	.....	.....	.....	.....	.....	0.059	1.50	Cloudy	Dr. H. Groot.
Medellin, Colombia, S. A.	25.23	640.8	.....	.....	65.5	18.6	84	Calm	.....	.....	0	1k	3ks	.....	.....	0	0	Fair	Thomas Herran.
York Factory, B. A.	.....	.....	30.18	766.6	—13 0	—25.0	74	W	14	6.3	.....	.....	9s	.....	.....	0.06	1.5	Gloomy	J. Fortescue, W. Wood
Honolulu, Oahu, H. I.	.....	.....	30.09	764.3	71	21.7	95	S	.....	.....	1	.....	.....	.....	.....	0	0	Clear	Daniel Smith.
Makawao, Maui, H. I.	.....	.....	29.99	761.7	60	15.6	76	Calm	.....	.....	0	0	0	.....	.....	0	0	.....	F. L. Clarke.

Note.—The originals give the amount of cloudiness by the scale 0 to 4, except York Factory, Makawao, Medellin and Paramaribo. The elevation of the barometer at Bismarck is 1,677 feet, or 511.1 meters; Cheyenne, 6,057.3 ft., or 1,846.2 m.; Clifton, about 2,592 ft., or 881.5 m.; Denver, 5,136 ft., or 1,565.2 m.; Dodge City, 2486ft., or 757.5 m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Florence, 1,550 (?) ft., or 472.5 (?) m.; Makawao, 2,207 ft., or 672.1 m.; Morgantown, 1,027.9 ft., or 313.3 m.; Medellin, 4,876 ft., or 1,486.2 m.; Mt. Washington, 6,285 ft., or 1,916.6 m.; North Platte, 2,846 ft., or 867.4 m.; Omaha, 1,054.6 ft., or 321.4 m.; Pike's Peak, 14,150.7 ft., or 4,313.1 m.; Salt Lake City, 4,362.2 ft., or 1,329.6 m.; Santa Fé, 6,862.2 (?) ft., or 2,091.6 (?) m.; Tucson, 2,545 (?) ft., or 775.7 (?) m.; Virginia City, 5,480 (?) ft., or 1,670.3 (?) m.; Yankton, 1,278 ft., or 389.5 m. The following constants are added in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Denver, 5.22 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fé, 6.54 in.; Tucson, 2.59 in.; Virginia City, 5.48 in. The elevation of Batavia is about 6 feet; the barometric readings need the addition of 0.2 mm. or 0.01 in. for reduction to sea-level.

UNITED STATES NAVAL SERIES.

By authority of the **SECRETARY OF THE NAVY.**

Furnished by the coöperation of the Navy Department, through Commodore Daniel Ammen, U. S. N., Chief of Bureau of Navigation.

STATIONS AND VESSELS.	True course toward—	Hourly rate in knots.	*Barometer as reported.		Temperature of the Air.		Relative Humidity.	Wind.				Clouds.				Rain-fall or melted snow in the past 24 hours.		State of Ocean.	Direction of swell from—	Weather.	Observer.
								Direction.	Velocity		Force.	Amount.		Direction.							
												Up'er	Low'r	Up'er	Low'r						
			Inches.	Millimeters.	Fahrenheit.	Centigrade.	Per cent.	From—	Miles per hour.	Meters per second.	0—10.	0—10.	0—10.	From—	From—	Inches.	Millimeters.				
Naval Academy, Annapolis, Md.			29.80	756.9	36	2.2	100	SSW			1		8			0	0			Cloudy	
Naval Hospital, Annapolis, Md.			30.21	767.3	33	0.6	100	Calm			0		6		SW	0	0			Cloudy	
Navy Yard, Mare Island, Cal.			30.11	764.8	47.5	8.6	96	E			2		0			0	0			Clear	
Navy Yard, Norfolk, Va.			30.32†	770.1†	35	1.7	100	Calm	0	0			6ck			0	0			Hazy	
Navy Yard, Pensacola, Fla.			30.25	768.3	46	7.8		N			1		10		S	0	0			‡D. clouds	
Navy Yard, Portsmouth, N.H.			30.14	765.5	34	1.1		Calm	0	0			10			0	0			Cloudy	
¶ Canonicus, New Orleans, La.			30.22	767.6	47	8.3	92	N			3		10							Cloudy	
Colorado, New York, N. Y.			30.26	768.3	38	3.3		SW	9	4.0			9		N&E	0	0			‡D. clouds	
Essex, Key West, Fla.			30.25	768.3	75	23.9	95	S			2		8		NNW			Smooth		‡D. clouds	
Hartford, Hampton Roads, Va.			30.35	770.9	41	5.0		S			1		0			0	0			Pleasant	
Lackawana, Mare Island, Cal.			30.22	767.6	52	11.1	93	E			1							Smooth		Blue sky	
Marion, Port Said, Egypt			29.89	759.2	53	11.7	86	WNW			5		6		ESE	Blank	Blank	Rough.	WNW	Stormy	
Michigan, Erie, Pa.			30.10	764.5	35	1.7	90	WSW			3		10		WSW					Cloudy	
Monongahela, Baltimore, Md.			30.20	767.1	38	3.3		Calm			0		..ks							‡D. clouds	
New Hampshire, Port Royal, S. C.			30.32	770.1	47	8.3		NNW			2-4		10			Bank	Blank			Squally	
Omaha, Panama			30.03	762.7	77.5	25.3	86	NNW			2		9		SW	0	0	Smooth		Cloudy	
Ossipee, Pensacola, Fla.			30.30	769.6	46	7.8		N			4		10		N					‡D. clouds	
Pensacola, Panama			30.04	763.0	78	25.6	91	NNW			2		9		S	0	0			Pleasant	
Plymouth, New Orleans, La.			30.32	770.1				NNW			4		10							Overcast	
¶ Rio Bravo, Matamoras, Mex.			30.06	763.5	57	13.9		N			1		10							Raining	
Santee, Annapolis, Md.			29.84†	757.9†	38	3 3	81	SSW			1		8							Cloudy	
St. Louis, League Island, Pa.			30.06	763.5	33	0.6		SW	1	0.4			8		SW	0	0			Cloudy	
Vandalia, Constantinople, Turkey.			30.33	770.4	38	3.3	90	NNE			3		10		SSW					‡D. clouds	
Wabash, Boston, Mass.			30.18	766.0	35	1.7		SW	10	4.5			1		E	0	0			Hazy	
Wyoming, Washington, D.C.			30.25†	768.3†	36	2.2		SE			1		8		SW						

* It is not known that the barometer is corrected for temperature, instrumental error or elevation. † Aneroid Barometer. ‡ Detached clouds. ¶ Barometer corrected for instrumental error and reduced to sea-level.

UNITED STATES MARINE SERIES

REPORTED TO THE OFFICE OF THE CHIEF SIGNAL OFFICER OF THE ARMY.

NAMES OF VESSELS.	TRUE COURSE TOWARD—	HOURLY RATE IN KNOTS.	BAROMETER REDUCED TO SEA-LEVEL.		TEMPERATURE OF THE AIR.		RELATIVE HUMIDITY.	WIND.				CLOUDS.				STATE OF OCEAN.	DIRECTION OF SWELL FROM—	WEATHER.	OBSERVER.
								Direction.	Velocity.		Force.	Amount.		Direction.					
												Up'er	Low'r	Upper.	Lower.				
			Inches.	Millimeters.	Fahrenheit.	Centigrade.	Per cent.	From—	Miles per hour.	Meters per second.	0—10.	0—10.	0—10.	From—	From—				
PACIFIC MAIL S. S. CO. MARINE SERIES. Furnished by the coöperation of ————, President; Williams, Blanchard & Co., Agents.																			
S. S. City of Peking																			Lt. Z. L. Tanner, U.S.N
OCCIDENTAL AND ORIENTAL S. S. CO. MARINE SERIES. Furnished by the coöperation of George H. Bradbury, President; T. H. Goodman, Agent.																			
S. S. Belgic																			Capt. John Metcalf.
S. S. Gaelic																			Capt. W. H. Kidley.
S. S. Oceanic																			Capt. H. Parsell.
NORTH GERMAN LLOYD OF BREMEN MARINE SERIES. Furnished by the coöperation of A. Schumacher & Co., Agents.																			
S. S. Baltimore																			Capt. H. Andressen.
S. S. Berlin																			Capt. C. Pohle.
S. S. Braunschweig																			Capt. K. Undütsch.
S. S. Nürnberg N. 46°, 12′, W. 33°, 53′	ENE		29.81	757 2	48.9	9.4		W			6		..c		W	Swells	SW,W	Blue sky	Capt. A. Jaeger.
S. S. Ohio																			Capt. G. Meyer.
MARINE SERIES. (Miscellaneous.) Furnished by the coöperation of the Observer named.																			
Schooner Addie Fuller, at Brunswick, Ga			30.14	765.5	45	7.2	100	NW	8	3.6			10d		NW				Capt. James Jorgensen

NOTE.—The schooner Addie Fuller gives the amount of cloudiness by the scale 0 to 4.

COLLATED AT THE OFFICE OF THE CHIEF SIGNAL OFFICER OF THE ARMY, WASHINGTON, D. C.

The records which appear in this Bulletin are copied from the regular exchanges of this office, made in each instance in compliance with an especial request and are published for the uses of the coöperating observers. The barometric readings in the first two columns are reduced to freezing and their respective standards; those in the second two also to mean sea-level. The "weather" is generally published as given.

When the distinction between the upper and lower strata of clouds is not reported, the *kinds* or *types*, viz: cirrus, cumulus, stratus, nimbus, scud, fracto, pallio, haze, fog and smoke, as indicated, respectively, by the letters c, k, s, n, d, f, p, hz., fg, and sm'e, are generally published with the amount in the lower-cloud column. The distinction between the upper and lower strata is carefully made in the United States Series and a portion of the Canadian Series, and the types are indicated by the above letters or their combinations in the proper column.

Albert J. Myer

Brig. Gen. (Bvt. Asst.) Chief Signal Officer, U. S. A.

BULLETIN

OF

INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON FEBRUARY 17, 1877.

7:35 A. M. WASHINGTON mean time.

6:7 A. M. MEXICO mean time.
7:7 A. M. SAN JOSE mean time.
0:6 P. M. LISBON mean time.
0:28 P. M. MADRID mean time.
0:48 P. M. GREENWICH mean time.
0:58 P. M. PARIS mean time.
1:1 P. M. BRUSSELS mean time.
1:4 P. M. UTRECHT mean time.
1:18 P. M. BERNE mean time.
1:26 P. M. CHRISTIANIA mean time.

1:33 P. M. COPENHAGEN mean time.
1:33 P. M. ROME mean time.
1:37 P. M. BERLIN mean time.
1:49 P. M. VIENNA mean time.
1:55 P. M. STOCKHOLM mean time.
2:18 P. M. ATHENS mean time.
2:39 P. M. CONSTANTINOPLE mean time.
2:44 P. M. ST. PETERSBURG mean time.
6:36 P. M. CALCUTTA mean time.
10:2 P. M. TOKEI mean time.

ALGERIAN SERIES.

Furnished by the coöperation of General d'Endeville, Commandant Supérieur du Génie in Algeria.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Nemours			30.15	765.7	78.8	26.0		SSE			3		5			0	0	Fair	Michel.
Algiers			30.18	766.6	63.3	17.4		SE			1		4			0	0	Fair	Biscarrat.
La Calle			30.06	763.4	73.4	23.0		S			3		1			0	0	Clear	Fleury.
Tunis			30.15	765.7	66.2	19.0		NE			5		2			0	0	Clear	Jacques.
Sfax																			
Saida			30.09	764.2	64.8	18.2		SSE			4		6			0	0	Fair	Millot.
Tebessa			30.05	763 3	62.8	17.1		W			2		2			0	0	Clear	Bourgeois.
Geriville			30.10	764.6	48.9	9 4		S			3		4			0	0	Fair	Lemaillot.
Laghouat			29.95	760.8	62.8	17.1		E			1		2			0	0	Clear	Guyot.
Biskra			29.99	761.7	50.0	10.0		NNW			4		8			0	0	Cloudy	Kuntz.

NOTE.—In the originals the distinction between the amount of upper and lower clouds is apparently not made. The weather is published as given. The rain-fall is measured at 7 a. m., local time.

AUSTRIAN SERIES.

Furnished by the cooperation of Professor Dr. Julius Hann, Director of the Imperial and Royal Central Meteorological Institute at Vienna.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Agram			29.87	758.8	56.5	13.6	59	SW			3		7			0.736	18.7		Prof. Ivan Stosir.
Cracow, I. R. Observatory			29.86	758.5	39.2	4.0	80	W			1		10			0	0		Dr. Wierzbicki.
Eperies			29.95	760.6	34.2	1.2	75	Calm			0		10			0	0		Julius Mikolik.
Gratz	28.59	726.2	29.85	758.1	48.4	9.1	73	E			2		9			0	0		Andreas Rospini.
Hermannstadt	28.56	725.6	30.05	763.3	31 6	— 0.2	51	ESE			3		5			0	0		Prof. Reissenberger.
Kremsmünster	28.60	726.4	29.98	761.6	37.4	3.0	90	W			2		10			0.169	4.8		Prof. C. Wagner.
Lemberg			29.89	759.3	38.5	3.6	67	S			2		7			0	0		Dr. T. Stanecki.
Nyiregyhaza																			Habasuda Daniel.
Pola			29.89	759.3	53.6	12.0	86	SSE			5		10s			0	0		I.R.Hydrographic Of'ce.
Szegedin			29.93	760.1	49.1	9.5	89	S			2		8			0	0		Karl Stancel.
Trieste			29.92	760.0	54.3	12.4	77	ESE			2		9			2.795	71.0	Raining	Prof. V. Farolfi.
Vienna			29.94	760.4	35.8	2.1	84	W			2		10			0.075	1.9		I. R. Central Met. Obs'y.

NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 7 p. m., local time. The elevation of Gratz is 343.5 meters, or 1,126.9 feet; Hermannstadt, 407.8 meters, or 1,337.9 feet; Kremsmünster, 383.6 meters, or 1,258.5 feet.

BELGIAN SERIES.

Furnished by the cooperation of J. C. Houzeau, Director of the Royal Observatory at Brussels.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Arlon			30.01	762.3	39.0	3.9	88	WSW			4		10			0.098	2.5		Royal Observatory.
Brussels			29.93	760.1	46.6	8.1	70	W			2	10ck	9n	NNW	WSW	0.055	1.40		
Furnes			29.93	760.1	46.4	8.0	75	W			4		10			0	0		
Maeseyck			29.89	759.3	44.1	6.7	92	SW			4		10			0.12+	3.1		

NOTE.—In the originals, the weather is occasionally given in general notes.

BRITISH SERIES

Furnished by the coöperation of Robert H. Scott, Esq., Director of the Meteorological Office, London, Alexander Buchan, Secretary of the Scottish Meteorological Society, Edinburgh, and the respective Observers.

STATIONS.	Barometer. Corrected for instrumental error and temperature. Inches.	Barometer. Corrected for instrumental error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Upper. 0—10.	Clouds. Amount. Lower. 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Aberdeen			29.88	758.9	44.1	6.7		NW	26	11.6			5			0	0	Blue sky	William Boswell.
Ardrossan			29.99	761.7	47	8.3		NW			3		5					*D. clouds	William McNeil.
Armagh, Observatory			30.08	764.0	46.7	8.2		W	10	4.5			10					Gloomy	S. Call, for Dr. Robinson.
Bidston (Liverpool Obs.)			30.01	762.2	46.0	7.8		W	25	11.2			8					Overcast	John Hartnup.
Birr Castle, (Parsonstown)			30.12	765.0	49.8	9.6		W			1–2		10					Overcast	J. Dreyer.
Bradford			29.96	761.0	46.3	7.9		NW			2		3			0.02	0.5	*D. clouds	J. McLandsborough.
Bridgetown, (Barbados)			30.10	764.6	82.0	27.8		NE			1		6					*D. clouds	Sergt. J. F. Halanen, A.
Cambridge, Observatory			29.94	760.5	49.0	9.4		NW			2		7					*D. clouds	H. Todd. [H.C.
Cardington			29.97	761.2	47.0	8.3		NW			2		7					*D. clouds	John McLaren.
Carlisle																			T. Bell, for J. Cartmell.
Chatham, School M. E			30.08	764.0	47.2	8.4		NW			1		8					*D. clouds	Maj. C. N. Martin, R.E.
Dartmoor	28.66	728.0	30.20	767.1	42.4	5.8		NW			5		10					Gloomy	R. E. Power.
Davos Platz, (Switzerland)	24.72	627.9			25.0	— 3.9	70	NE			2		10			0.103	2.6	Snowing	Francis Redford, M. A.
Donaghadee			30.04	763.0	47	8.3		W			4		10					Overcast	J. Mac Gowan.
Dover			29.97	761.2	45	7.2		WNW			3		5					½ clouded	J. Costello.
Eccles, (near Manchester)			29.99	761.0	47.9	8.8		NW	9.0	4.0			6					*D. clouds	Thomas Mackereth.
Falmouth, Observatory			30.18	766.6	49.7	9.8		WNW			4		6					Overcast	The Staff.
Fort Napier, (Natal)	27.73	704.3	29.97	761.2	68.2	20.1		E			3		10					Overcast	P'vt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.93	760.2	92	33.3		N			0		3					*D. clouds	
Galway, Queen's College			30.07	763.8	45	7.2		SW			1		10					Gloomy	Prof. A. H. Curtis.
Gibraltar, (Mediterranean)			29.92	760.0	61.3	16.3		NW			3		9					Overcast	Corpl. C. Aitken, A.H.C.
Glasgow, Observatory			29.95	760.7	45.0	7.2		WNW			2		4					Blue sky	Lewis Stuart.
Great Yarmouth			29.89	759.2	46	7.8		NW			4		6					Hazy	G. T. Watson.
Greenwich, Royal Obs'y			30.00	762.0	47.2	8.4		NW			4		7					*D. clouds	The Staff, for G. B. Airy.
Guernsey			30.12	765.0	48.5	9.2		NW			3		5					*D. clouds	Dr. S. E. Hoskins.
Helston			30.19	766.8	51	10.6		NW			4		2c			0	0	*D. clouds	M. P. Moyle.
Holyhead			30.06	763.5	48	8.9		NW			4		10					Overcast	John Tilston.
Kew, Observatory			30.01	762.2	47.7	8.7		WNW	19	8.5			4					*D. clouds	The Staff.
Kingstown			30.12	765.0	47	8.3		WNW			4		10					Overcast	George Mitchell.
Leicester Museum			29.96	761.0	46.9	8.3		NW			5		7					*D. clouds	Wm. J. Harrison, F.G.S.
Malta, (Mediterranean)			30.16	764.8	61.8	16.6		SE			2		6k					*D. clouds	Corp'l. P. Bravis, A.H.C.
Nairn			29.92	760.0	45	7.2		WNW			2		8					¾ clouded	W. D. Penny.
Nassau, (Bahamas)			30.11	764.8	78.5	25.8		W			2		9					Squally	Surg. Maj. Henry.
Nottingham, Observatory			29.96	761.0	47.5	8.8		NW			5		1c,k	WNW	NW	0.014	0.36	Blue sky	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			30.01	762.2	45.2	7.3		NW			5		9					*D. clouds	Rev. Stephen Whitty.
Oxford, Radcliff Obs'y			30.02	762.5	48	8.9		WNW			3		9					Overcast	J. Lucas.
Plymouth			30.14	765.5	50.5	10.3		WNW			2		10					Overcast	John Merrifield.
Roche's Point			30.18	766.6	50	10.0		NNW			4		2					Clear	W. Kennedy.
Saint Ann's Head			30.13	765.3	48	8.9		NW			3		10					Overcast	John C. Walker.
Saint Helier, (Jersey)			30.13	765.3	50.5	10.3		N			4		5					½ clouded	A. P. Amy.
Sandwick Manse, (Orkneys)			29.85	758.2	44	6 7		NW	20	8.9			4					Showery	Rev. C. Clouston, LL. D.
Scarborough																			F. Shaw.
Scutari Cemetery, (Turkey)			30.20	767.1	43.0	6.1		S			1		0					Blue sky	Sergt. W. H. Lyne.
Sheffield			29.97	761.2	47.9	8.8		WNW			2		2			0	0	Blue sky	W. F. Cooper.
Silloth Rectory			29.97	761.2	52.6	11.4	71	W			1		2			0.265	6.73	*D. clouds	Rev. Francis Redford
Stonyhurst, Observatory			29.98	761.5	45.4	7.4		W			2		4					Blue sky	Rev. S. J. Perry.
Stornoway, Lews C., (Hebr.)			29.92	760.0	43	6.1		SW			1		8					*D. clouds	John Smith.
Stratfield Turgiss			30.04	763.0	48.3	9.1		NW			1		8					Overcast	Rev. Charles H. Griffith.
Thurso			29.86	758.4	44	6.7		NW			4		7					*D. clouds	John Trotter.
Truro, Royal Institution			30.17	766.3	52	11.1		NW			6		10					Gloomy	W. Newcombe.
Valencia, Observatory			30.08	764.0	50.0	10.0		WSW	15	6.7			10					*D. clouds	The Staff.
SUB-SERIES.																			
Calf of Man, (Isle of Man)																			Henry Mercer.
Cape Good Hope, Obs'y			29.92	760.0	91.9	33.3	33	SSE	6	2.7		0	0						The Staff, for E. J. Stone.
Hobart Town, (Tasmania)			29.61	752.1	71.0	21.7	68	NW			3		10kn			0.04	1.0	Covered	Francis Abbott, F.R.A.S.
Leith, Restalrig Park			29.96	761.0	46.9	8.3		W			2	7ck				0	0	Fine	Andrew Gibb.
Mauritius, Observatory			29.91	759.7	81.6	27.6	63	ESE	13.8	6.2		2	7		ESE	0.02	0.5	Cloudy	C. Meldrum.
Melbourne, Observatory			29.89	759.2	62.0	16.7	72	E	5	2.2			0			0.01	0.3	Very fine	R. L. J. Ellery.
Monach L't-house, (Hebrides)																			J. Youngclause.
North Unst, (Shetland Is.)																			Robert Burnet.

NOTE.—Generally, the originals do not give the relative humidity, rain-fall, or distinction between upper and lower clouds. The originals give the wind direction to 32 points and weather by the Beaufort notation. The originals give the barometer for Aberdeen, Cardington, Freetown, Galway, Oxford, St. Helier, Sandwick, Scarborough, Stonyhurst, Leith, Monach and North Unst as read off and the amount of cloudiness for Stornoway by the scale 0 to 4. The wind-force is given by the scale 0 to 12 in the official series; 0 to 6 in the sub-series; except in lbs. per square foot for Greenwich and Hobart Town. The rain-fall is measured at Aberdeen at 10 a. m.; Bradford, 9 a. m.; Hobart Town, 7:30 a. m.; Nottingham, 6 p. m.; Mauritius, 9 a. m., local time. The elevation of Dartmoor is 1,400 feet, or 426.7 meters; Davos Platz, 5,107 feet, or 1,557 meters; Fort Napier, 2,200 feet, or 670.6 meters. *Detached clouds.

By authority of the MINISTER OF FOREIGN AFFAIRS.

COSTA RICA SERIES.

Furnished by the coöperation of Senor Federico Maison, Director of the Central Office of Statistics and Meteorology.

STATIONS.																				
San José																				

DANISH SERIES.

Furnished by the coöperation of Captain N. Hoffmeyer, Director of the Royal Danish Meteorological Institute at Copenhagen.

STATIONS.																				
Copenhagen			29.60	751.7	36.0	2.2	94	SW			2		10					Raining		
Fanöe			29.57	751.0	39.2	4.0	87	W			4		9							
Godthaab, (Greenland)			29.11	739.3	12.7	—10.7	76	NW			2		10							
Stykkisholm, (Iceland)			29.27	743.5	36.1	2.3	94	SE			4		8							
Thorshavn, (Faröe)			29.83	757.7	41.5	5.3	60	S			2		10							
Vestervig			29.58	751.2	30.2	— 1.0	92	NNE			6		10							

NOTE.—The originals give the wind-force by the scale 0 to 6; occasionally, weather by Vienna symbols; no distinction between the amount of upper and lower clouds.

FRENCH SERIES.

Furnished by the co operation of His Excellency, U. J. Le Verrier, Director of the Paris Observatory, and the respective Observers.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather	Observer.
Alençon	.....	.....	30.13	765.3	50.0	10	67	NNW	.....	.....	2	.....	8kn	.....	NNW	0	0	Very cloudy	Normal School.
Amiens	.....	.....	30.03	762 8	50.0	10.0	85	SE	.....	.....	3	.....	2	.....	SE	0	0	Slightly cl'dy	Normal School.
Avignon	.....	.....	30.05	763.3	63.2	11.8	39	N	.....	.....	4	.....	2	.....	NNW	0	0	Slightly cl'dy	Normal School.
Bar-sur-Seine	.....	.....	30.08	764.0	43.9	6.6	77	W	.....	.....	2	.....	8kn	.....	W	0.220	5.6	Very cloudy	C. Saillard.
Beaumette, (near Angers)	.....	.....	30.13	765.4	47.7	8.7	61	NW	5.4	2.4	.....	.....	.....	.....	NNW	0	0	.....	Beaumette Observ'tory.
Beauvais	.....	.....	30.06	763.4	46.8	8.2	61	WNW	.....	.....	2	.....	8	.....	WNW	0	0	Very cloudy	Normal School.
Besançon	.....	.....	30.10	764.6	45.0	7.2	69	SSW	.....	.....	3	.....	5	.....	NW	0.650	16.5	Cloudy	Normal School.
Bourg en Bresse	.....	.....	30.13	765.4	45.1	7.3	66	N	.....	.....	4	.....	5k	.....	NW	0.374	9.5	Cloudy	Normal School.
Bourges	.....	.....	30.14	765.5	45.3	7.4	85	WNW	.....	.....	2	.....	5	.....	WNW	0.150	3.8	Partly cl'dy.	Normal School.
Brest	.....	.....	30.15	765.8	51.3	10.7	58	NW	.....	.....	4	.....	9	.....	NW	0.059	1.50	.....	Naval Observatory.
Carcassonne	.....	.....	30.14	765.5	48.9	9.4	73	W	.....	.....	1	.....	2	.....	E	0.04	1.	Slightly cl'dy	Normal School.
Caen	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Chartres	.....	.....	30.00	762.1	45.3	7.4	91	ESE	.....	.....	2	.....	9	.....	E	0	0	.....	Normal School.
Châlons-sur-Marne	.....	.....	30.06	763.4	44.8	7.1	77	NW	.....	.....	3	.....	10kn	.....	SE	0.201	5.2	Covered	Normal School.
Clermont	.....	.....	30.13	765.3	46.0	7.8	64	W	.....	.....	1	.....	8	.....	NW	0.177	4.5	.....	Puy de Dome Obs'y.
Commercy	.....	.....	30.07	763.7	42.6	5.9	83	W	.....	.....	2	.....	5kn	.....	W	0.126	3.2	Cloudy	Normal School.
Commune de Gréasque*	.....	.....	30.03	762.5	47.3	8.5	38	NW	.....	.....	6	.....	2	.....	NW	0	0	.....	M. Kina.
Grenoble	.....	.....	30.11	764.7	41.7	5.4	75	NNW	.....	.....	4	.....	5cn	.....	NW	0.689	17.5	Cloudy	Normal School.
La Roche-sur-Yon	.....	.....	30.23	767.8	51.4	10.8	58	SW	.....	.....	1	.....	5	.....	E	0	0	Cloudy	Normal School.
Le Mans	.....	.....	30.14	765.5	45.7	7.6	75	NW	.....	.....	3	.....	2	.....	NW	0.04	1.	Slightly cl'dy	Normal School.
Lons-Le-Saulnier	.....	.....	30.12	765.0	45.5	7.5	97	N	.....	.....	2	.....	5	.....	.....	0	0	Cloudy	Normal School.
Lorient	.....	.....	30.23	767.9	51.4	10.8	65	N	.....	.....	1	.....	5	.....	N	0	0	Cloudy	Naval Observatory.
Mâcon	.....	.....	30.21	767.2	44.6	7	78	SW	.....	.....	2	.....	5	.....	W	0.138	3.5	Cloudy	Normal School.
Metz	.....	.....	30.08	764.0	43.3	6.3	95	SW	.....	.....	3	.....	7k	.....	SW	0.012	0.3	.....	M. Schuster.
Mirecourt	.....	.....	30.01	762.3	46.0	7.8	61	SSW	.....	.....	2	.....	1	.....	NNE	0	0	Fair	Normal School.
Nismes	.....	.....	30.05	763.2	55.8	13.2	50	NW	.....	.....	1	.....	.....	.....	.....	0	0	.....	Normal School.
Orleans	.....	.....	30.10	764.5	46.4	8	81	W	.....	.....	2	.....	5	.....	W	0.126	3.2	Cloudy	Normal School.
Paris, Observatory	.....	.....	30.08	763.9	46.6	8.1	65	W	.....	.....	3	.....	7ck	.....	NW	0.113	2.87	Very cloudy	National Observatory.
Parthenay	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Privas	.....	.....	30.10	764.6	45.0	7.2	51	N	.....	.....	4	.....	10	.....	N	0.16	4.	Covered	Normal School.
Rochefort, Observatory	.....	.....	30.21	767.2	55.0	12.8	67	NW	.....	.....	2	.....	5	.....	SE	0	0	⅜ covered	Naval Observatory.
Rouen	.....	.....	30.05	763.2	49.5	9.7	62	WNW	.....	.....	2	.....	10	.....	NW	0.051	1.3	Covered	Normal School.
Saint Lo	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Tarbes	29.10	739.1	30.20	767.1	48.6	9.2	58	W	.....	.....	2	.....	5	.....	E	0.138	3.5	Cloudy	Normal School.
Villefranche*	.....	.....	30.13	765.4	46.0	7.8	84	NW	.....	.....	6	.....	8	.....	N	0.142	3.6	Very cloudy	Normal School.
Sub-Series.																			
Fort de France, Martinique	.....	.....	29.97	761.1	77.7	25.4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	L'Abbé Marchési.
Marseilles	.....	.....	29.98	761.6	52.3	11.3	62	NW	.....	.....	4	.....	2	.....	.....	Inap.	Inap.	Partly cl'dy.	Marseilles Observatory.
Mont-Louis	24.97	634.3	30.29	769.3	39.7	4.3	40	S	11.2	5.00	.....	.....	4	.....	W	0	0	.....	—. Falguère.
Montsouris, Paris	.....	.....	30.06	763.5	46.9	8.3	73	NW	.....	.....	2	.....	8	.....	NW	0.020	0.5	.....	Montsouris Observatory
Perpignan	.....	.....	30.16	766.0	53.8	12.1	48	N	31.7	14.17	.....	.....	1	.....	NW	0	0	.....	Dr. Fines.
Pic du Midi, (Summit,) H. P.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. Raylac.
Pic du Midi, (Plantade,) H. P.	22.47	570.7	.....	.....	21.2	— 6.0	.....	W	.....	.....	4–6	.....	8	.....	.....	0.035	0.9	Snowy	General de Nansouty.
Saint Maur, (near Paris)	.....	.....	30.07	763.7	46 9	8.3	71	W	.....	.....	1	.....	9	.....	.....	0.188	3.5	Very cloudy	E. Renou.
Toulouse	.....	.....	30.22	767.6	45.9	7.7	71	NW	.....	.....	6	.....	8	.....	.....	0.122	3.1	.....	Toulouse Observatory.
Tours	.....	.....	30.18	765.4	48.2	9.0	71	NW	.....	.....	2	.....	8	.....	WNW	0.189	4.8	.....	C. Marquet.
Versailles, (near Paris)	.....	.....	30.07	763.8	45.7	7.6	72	NW	.....	.....	1	.....	7	.....	.....	0.027	0.69	Fair	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai)	.....	.....	30.61	777.4	32.6	0.3	66	N	3.4	1.5	.....	.....	5	.....	.....	0	0	.....	Marc Dechevrens, S. J.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—Generally, the originals give the wind-force by the scale 0 to 7; no distinction between upper and lower clouds, and, in the official series, the amount by the scale 0 to 4 the rain-fall as measured at 7, 8 or 9 a. m., local time; at Clermont, 9 a. m. of the following day; the weather in general terms as published. The elevation of Clermont is 388 meters, or 1,272.9 feet; Commune de Gréasque, 322 meters, or 1,056.4 feet; Tarbes, 308 meters, or 1,010 feet; Mont-Louis, 1,580.40 meters, or 5,184.8 feet; Pic du Midi, (Summit,) 2,877 meters, or 9,439.1 feet; Pic du Midi, Plantade,) 2,366 meters, or 7,762.6 feet. In correcting the Mont-Louis barometric observations for altitude, the constant 135. millimeters has been added. *Bouches-du-Rhône

GERMAN SERIES.

Furnished by the coöperation of Professor Dr. G. Neumayer, Director of the German Naval Observatory, Hamburg.

Bamberg	.....	.....	29.90	759.5	43.7	6.5	60	W	.....	.....	3	.....	3	W	.....	0	0	.....	Prof. T. Hoh.
Berlin	.....	.....	29.80	757.0	47.3	8.5	60	SW	.....	.....	3	.....	7	.....	.....	0	0	.....	Prof. Arndt.
Breslau	.....	.....	29.87	758.8	38.1	3.4	89	WNW	.....	.....	3	.....	10	.....	.....	0.110	2.8	.....	Royal University Obs'y.
Carlsruhe	.....	.....	29.99	761.7	44.6	7.0	73	SW	.....	.....	3	.....	10	.....	.....	0.677	17.2	.....	A. Senz.
Cassel	.....	.....	29.84	757.9	44.2	6.8	82	W	.....	.....	4	.....	8	WSW	.....	0.043	1.1	.....	Dr. H. Möhl.
Crefeld	.....	.....	29.85	758.2	44.6	7.0	80	SW	.....	.....	4	.....	8	.....	.....	0.16	4.	.....	Director Lose.
Emden	.....	.....	29.77	756.1	39.0	3.9	98	W	.....	.....	3	.....	10	.....	.....	0.091	2.3	.....	Prof. Prestel.
Frankfort on the Main	.....	.....	29.99	761.7	47.1	8.4	62	W	.....	.....	2	.....	4	.....	.....	0	0	.....	Physical Society.
Friedrichshafen	28 61	726.7	30.08	764.1	42.1	5.6	72	WNW	.....	.....	5	.....	10	.....	.....	0.378	9.6	.....	M. Wilhelm.
Hamburg	.....	.....	29.67	753.5	41.5	5.3	92	SW	.....	.....	5	.....	10n	SW	.....	0.142	3.6	Raining	Captain F. Hegemann.
Kiel	.....	.....	29.61	752.1	42.8	6.0	89	WSW	.....	.....	4	.....	10	.....	.....	0.169	4.3	.....	Prof. G. Karsten
Königsberg, (Prussia)	.....	.....	29.79	756.6	35.6	2.0	96	SW	.....	.....	2	.....	10	.....	.....	0.012	0.3	.....	Prof. E. Luther.
Köslin	.....	.....	29.78	756.3	41.7	5.4	.....	S	.....	.....	2	.....	7	.....	.....	0	0	.....	H. Müller.
Leipsic	.....	.....	29.86	758.4	43.9	6.6	70	SW	.....	.....	4	.....	6	WSW	.....	0.067	1.7	.....	Prof. Bruhns.
Memel	.....	.....	29.79	756.7	35.2	1.8	96	Calm	.....	.....	0	.....	10ks	.....	.....	0.024	0.6	Foggy	Reinbrecht & Skalweit.
Münster	.....	.....	29.76	755.8	45.1	7.3	82	SW	.....	.....	3	.....	10	.....	.....	0.276	7.0	.....	Prof. E. Heis.
Neufahrwasser	.....	.....	29.80	756.9	38.7	3.7	93	Calm	.....	.....	0	.....	10	.....	.....	0.020	0.5	Smoke-haze	A Lothe.
Posen	.....	.....	29.84	757.8	41.9	5.5	96	W	.....	.....	6	.....	10	.....	.....	0.118	3.0	.....	Dr. Magener.
Strassburg, (in Alsace)	.....	.....	30.02	762.6	48.2	9.0	57	N	.....	.....	4	.....	6	W	.....	0.244	6.2	.....	Dr. Schur.
Stuttgart	.....	.....	29.98	761.5	41.4	5.2	72	W	.....	.....	2	.....	8	.....	.....	0.067	1.7	.....	Prof. Schoder.
Thorn	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Dr. Hasenbalg.
Treves, (Trier)	.....	.....	29.87	758.7	45.1	7.3	68	W	.....	.....	6	.....	10	.....	.....	0.043	1.1	.....	Prof. Flesch.
Weissenburg, (Bavaria)	28.43	722.2	29.98	761.5	40.1	4.5	65	W	.....	.....	4	.....	10	W	.....	0.114	2.9	.....	Dr. von Bebber.
Wustrow, Naval School	.....	.....	29.72	754.9	41.2	5.1	84	S	.....	.....	5	.....	10	.....	.....	0	0	.....	E. F. Schütz.
German Naval Series.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—The elevation of Friedrichshafen is 413.4 meters, or 1,356.3 feet; Weissenburg, 431 meters, or 1,414.0 ft. In the originals the distinction between the amount of upper and lower clouds is not made. It is not always certain that the remarks in the weather column refer to the moment of observation.

GREEK SERIES.

Furnished by the coöperation of Professor Dr. J. F. Julius Schmidt, Director of the Royal Observatory at Athens.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Athens	.....	.....	30.22	767 5	52 3	11.3	.....	W	.....	.....	.....	...	.....	.....	.....	.....	.....	Very clear.	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

Note.—The originals give the barometer corrected, but not reduced to sea-level; occasionally the kind of clouds; the weather as published. They omit the humidity, wind-force, amount of cloudiness and rain-fall.

INDIAN SERIES.

Furnished by the coöperation of H. F. Blanford, Meteorological Reporter to the Government of India.

Kurrachee	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Deesa	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Bombay	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Poona	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Lahore	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Belgaum	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Bangalore	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Rorkee	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Agra	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Trichinopoly	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Nagpur	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Madras	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Lucknow	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Allahabad	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Patna	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Hazaribagh	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Cuttack	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Calcutta (Alipore)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Goalpara	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Chittagong	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Sibsagar	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Rangoon	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Jubbulpore	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
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.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

ITALIAN SERIES.

Furnished by the cooperation of His Excellency the Minister of Agriculture, Industry and Commerce, and the respective Observers.

Udine	.....	.....	29.87	758.7	49.6	9.7	91	SW	8.7	3.9	.....	.....	10	.....	.....	0.026	0.7	Light rain	Prof. Giovanni Clodig·
Stelvio	21.88	555.7	.....	.....	17.6	— 8.0	.....	W	.....	.....	6	.....	10	.....	.....	0.618	15.7	Snowing	Signora Ernesta Manfredi.
Valdobbia	21.88	555.7	.....	.....	22.5	— 5.3	85	WSW	.....	.....	6	.....	10	.....	.....	Inap.	Inap.	Snowing	Ab. Dom. Mongini.
Padua	.....	.....	29.84	757.8	49.3	9.6	85	N	9.4	4.2	.....	.....	10	.....	.....	0	0	.....	Prof. Dott. Lor nzoni.
Vicenza	.....	.....	29.85	758.1	46.0	7.8	93	N	3.8	1.7	.....	.....	10	.....	.....	0.109	2.7	Raining	Conte Alm. Da Schio.
Verona	.....	.....	29.82	757.5	52.9	11.6	74	NE	.....	.....	6	.....	10	.....	.....	0.535	13.6	Raining	Dott. B. Bertoncelli.
Bergamo	28.45	722.6	29.80	756.8	43.2	6.2	79	NW	.....	.....	2	.....	10	.....	.....	0.929	23.6	Raining	Prof Trionfini Carlo.
Domodossola	.....	.....	29.85	758.3	46.9	8.5	81	Calm	.....	.....	0	.....	10	.....	.....	0.098	2.5	Raining	P of. Giuseppe Ciliza.
Milan	.....	.....	29.85	758.2	45.7	7.6	93	E	.....	.....	1	.....	10	ENE	.....	0.862	21.9	Raining	Ab. Gio. Capelli
Pavia	.....	.....	29.83	757.7	44.2	6.8	93	NE	.....	.....	4	.....	10	.....	.....	0.504	12.8	Raining	Pr .. Gio. Cantoni.
Moncalieri	.....	.....	29.84	758.0	46.4	8.0	82	WNW	0	0	.....	.....	9	E	.....	0	0	..	Pro P. F. Denza.
Mondovi	27.88	708.0	29.82	757.4	43.9	6.6	79	NW	.....	.....	4	.....	9	NNW	.....	0.016	0.4	Thunder-storm	Prof. F. C. Bruno.
Porto Maurizio	.....	.....	29.83	757.7	55.6	13.1	61	WSW	.....	.....	8	.....	4	WSW	.....	0	0	.....	Prof. .. Vassallo.
Genoa	.....	.....	29.82	757.3	54.5	12.6	78	S	13.6	5.8	.....	.....	10	S	.....	0.012	0.3	Rain & hail	Prof. G M Garibaldi.
Piacenza	.....	.....	29.82	757.5	44.6	7.6	97	E	1.2	0.6	.....	.....	10	.....	.....	0.126	3.2	Raining	Dott. G. anzi.
Parma	.....	.....	29.85	758.2	50.0	10.0	72	SW	.....	.....	4	.....	10	.....	.....	0	0	Foggy	Prof. P. Pigorini.
Florence	.....	.....	29.85	758.2	59.5	15.3	80	S	.....	.....	2	.....	10	S	.....	0.217	5.5	.....	Cav. F. Meucci.
Leghorn	.....	.....	29.88	758.9	57.6	14.2	69	SW	9.4	4.2	.....	.....	10	SSE	.....	0	0	.....	Prof. P. Monte.
Siena	28.70	728.9	29.92	760.0	54.5	12.5	87	S	1.8	0.8	.....	.....	10	SW	.....	0.063	1.6	Thunder-storm	Prof. L Toscani.
Urbino	28.32	719.4	29.91	759.8	51.8	10.7	75	SSW	.....	.....	4	.....	10	.....	.....	0	0	.....	Prof. P. Serpieri.
Pesaro	.....	.....	29.91	759.8	54.5	12.7	69	SE	19.:	8.6	.....	.....	10	S	.....	0	0	.....	Prof. Luigi Guidi.
Ancona	.....	.....	29.91	759.6	54.5	12.5	77	SE	.....	.....	4	.....	10	S	.....	0.008	0.2	Light rain	Prof. F. De— Bosis.
Grosseto	.....	.....	29.93	760.1	59.0	15.0	79	SSE	.....	.....	4	.....	8	S	.....	0	0	.....	Avv. P. Ponticelli.
Rome	.....	.....	30.00	761.9	55.0	12.8	72	SE	23.7	10.6	.....	.....	10	SE	.....	0.012	0.3	Light rain	Profs. P. Secchi & L. Respighi.
Naples, O. U.	.....	.....	30.08	763.9	59.4	15.0	56	SW	.....	.....	2	.....	10	SW	.....	0	0	.....	Prof. L. Palmieri.
Lecce	.....	.....	30.15	765.7	56.5	13.6	65	SSE	19.9	8.9	.....	.....	9	.....	.....	0	0	.....	Prof. C. De—Giorgi.
Cosenza	.....	.....	30.10	764.4	60.4	15.8	73	SE	3.8	1.7	.....	.....	9	.....	.....	0	0	.....	Prof. F. D. Conti.
Cagliari	.....	.....	29.90	759.4	66.2	19.0	46	NW	.....	.....	4	.....	7	NW	.....	0	0	.....	Prof. A. Pacinotti.
Riposto, (Sicily)	.....	.....	30.04	763.0	58.6	14.8	70	W	.....	.....	2	.....	5	S	.....	0	0	.....	Prof. F. Cafiero.
Palermo	.....	.....	29.98	761.6	62.6	17.0	56	ENE	1.8	0.8	.....	.....	10	.....	.....	0	0	.....	Prof. G. Cacciatore.
Caltanissetta	28.11	714.0	30.10	764.4	50.5	10.3	60	S	.....	.....	2	.....	7	NW	.....	0	0	.....	Prof. A. Pagani.
Siracusa	.....	.....	30.17	766.2	60.4	15.8	67	SSW	.....	.....	2	.....	9	SSW	.....	.....	.....	.....	Prof. V. Giuliano.
Sub-Series.																			
Naples, S. R.	.....	.....	30.07	763.7	54.3	12.4	70	SW	0	0	.....	.....	10	SW	.....	0	0	.....	Prof. F. Brioschi
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

Note.—The originals give the wind-force by the scale 0 to 4, or the velocity in kilometers per hour; generally, no distinction between upper and lower clouds, occasionally the weather by the Vienna symbols. The elevation of Stelvio is 2,543.0 meters, or 8,342.9 feet; Valdobbia, 2,548.0 meters or 8,359.3 feet; Bergamo, 379.6 meters, or 1,24 8 feet; Mondovi, 556 meters, or 1,824.2 feet; Siena, 348.5 meters, or 1,143.3 feet; Urbino, 451 meters, or 1,479.7 feet; Caltanissetta, 570.5 meters, or 1,871.0 feet.

JAPANESE SERIES.

Furnished by the coöperation of the Imperial University of Tokei, Japan.

Tokei	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Prof. P. V. Veeder.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

Note.—The originals give the amount of cloudiness by the scale 0 to 4 without distinguishing between upper and lower clouds. The rain-fall is measured at 7 a. m., cal time.

By authority of the SECRETARY OF PUBLIC WORKS.

MEXICAN SERIES.

Furnished by the coöperation of Senor Mariano Barcena, Director of the Central Meteorological Observatory in the City of Mexico.

STATIONS.	BAROMETER. Corrected for instrum'tal error and temperature. Inches.	BAROMETER. Corrected for instrum'tal error and temperature. Millimeters.	BAROMETER. Reduced to sea-level. Inches.	BAROMETER. Reduced to sea-level. Millimeters.	TEMPERATURE OF THE AIR. Fahrenheit.	TEMPERATURE OF THE AIR. Centigrade.	RELATIVE HUMIDITY. Per cent.	WIND. Direction. From—	WIND. Velocity. Miles per hour.	WIND. Velocity. Meters per second.	WIND. Force. 0—10.	CLOUDS. Amount. Up'er 0—10.	CLOUDS. Amount. Low'r 0—10.	CLOUDS. Direction. Upper. From—	CLOUDS. Direction. Lower. From—	RAIN-FALL OR MELTED SNOW IN THE PAST 24 HOURS. Inches.	RAIN-FALL OR MELTED SNOW IN THE PAST 24 HOURS. Millimeters.	WEATHER.	OBSERVER.
Mexico																			Mariano Barcena.
																			Vicente Reyes.
																			Miguel Perez.

NOTE.—The elevation of Mexico is 2,290 meters, or 7,512.9 feet. The rain-fall is measured at 6 a. m., local time. (Engineers in charge.)

NETHERLANDS' SERIES.

Furnished by the coöperation of Professor Buys Ballot, Director of the Royal Meteorological Institute of the Netherlands at Utrecht.

Flushing			29.95	760.6	45.7	7.6		NW			4					0.031	0.8		
Groningen			29.65	753.1	41.5	5.3										0.185	4.7		
Helder			29.75	755.6	43.2	6.2		W			5					0.047	1.2		
Utrecht			29.80	756.9	46.6	8.1	79	WSW			4		10			0.150	3.8	Overcast	

NOTE.—The originals give the wind-pressure in kilograms per square meter; for Utrecht, they give the weather as published, from which the amount of cloudiness is taken by the scale 0 to 4, without distinguishing between upper and lower clouds. It is assumed that the barometer readings have been reduced to sea-level.

NORWEGIAN SERIES.

Furnished by the cooperation of Professor H. Mohn, Director of the Royal Norwegian Meteorological Institute at Christiania.

Bergen			29.64	752.9	36.9	2.7	65	W	3.8	1.7		0				0	0		
Brönö			30.01	762.2	23.4	— 4.8	53	S	17.9	8		1				0	0		
Christiania			29.85	758.1	17.2	— 8.2	71	NNW	15.9	6.7		10				0.244	6.2	Snowing	
Tromsö			30.00	761.9	19.0	— 7.2	67	SW	11.2	5		0				0	0		

NOTE.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols. The cloudiness and weather at Bergen refer to 2h., p. m., local time, instead of 1h., 4 min.

PORTUGUESE SERIES.

Furnished by the coöperation of J. C. de Brito Capello, Director of the Meteorological Observatory of the Infante Don Luiz at Lisbon.

Angra, (Azores)			30.24	768.0	57.9	14.4	84	SSE	8.1	3.6		8						Raining	Dr. J. A. Sampaio.
Campo Major			30.02	762.5	64.8	18.2	29	N	15.4	6.9		1				0	0	Solar corona	Dr. A. M. R. dos Santos.
Funchal, (Madeira)			30.20	767.0	58.6	14.9	67	NNE	1.3	0.6		7				0.010	0.4		Capt. D. A. de Cunha.
Lisbon			30.06	763.4	65.3	18.5	35	N	23.7	10.6		0				0.520	13.2		The Observatory.
Ponta Delgada, (Azores)			30.31	769.9	58.6	14.8	72	S	11.2	5.0		10				0	0		

NOTE.—The originals give the wind-velocity in kilometers per hour; occasionally, the weather by the Vienna symbols; the amount of cloudiness without distinguishing between upper and lower clouds; the barometer corrected but not reduced to sea-level. The rain-fall at Lisbon is measured at noon, instead of 0 h. 6 m., p. m.

RUSSIAN SERIES.

Furnished by the cooperation of Professor H. Wild, Director of the Imperial Central Physical Observatory of Russia, at St. Petersburg.

Warsaw			29.83	757.6	39.9	4.4	80	SE	4	2		9							Astronomical Obs.
Wilna			29.85	758.2	32.9	0.5	84	S	2	1		10							Astronomical Obs.
Dorpat			29.95	760.6	15 8	— 9.0	93	ENE	11	5		10						Snowing	Physical Cabinet.
St. Petersburg			30.18	766.5	— 1.1	—18.4	85	ENE	11	5		10							Central Physical Obs.
Kuopio			30.27	768.9	— 3.3	—19.6	87	Calm	0	0		0							Ch. Forsten.
Kieff			30.05	763.3	27.7	— 2.4	79	S	7	3		3							Physical Cabinet.
Nikolaiev			30.28	769.1	30.7	— 0.7	53	S	13	6		1							Kurdakof.
Kertch			30.28	769.1	28.0	— 2.2	75	N	4	2		2							Lagorio.
Moscow			30.23	767.8	11.8	—11.2	79	SSE	7	3		10							Meteorological Obs.
Lugan			30.30	769.6	5.4	—14.8	65	Calm	0	0		0							Meteorological Obs.
Archangel			30.10	764.5	2.8	—16.2	89	WNW	29	13		6							Ogorodnikof.
Tiflis	28.65	727.7	30.13	765.2	37.0	2.8	91	Calm	0	0		10							Physical Observatory.
Astrakhan			30.36	771.2	19.0	— 7.2	92	NE	4	2		10							Sebastianof.
Kasan			30.11	764.8	8.8	—12.9	68	WSW	2	1		0							Physical Cabinet.
Orenburg			29.78	755.1	33.3	0.7	90	SE				10							Tschernischei.
Ekaterinburg	28.90	734.1	29.93	760.2	8.1	—13.3	68	WSW	22	10		10							Meteorological Obs.
Nukuss			30.02	762.5	51.1	—10.6	64	N	9	4		8							
Kasaly																			Bobrof.
Tashkend	28.65	727 6	30.38	771.7	51.3	10.7	31	Calm	0	0		0							Michelson.
Barnaul			30.39	771 9	18.9	— 7.3	75	S	4	2		10							Meteorological Obs.
Yeniseisk			29.98	761.6	25.9	— 3.4	83	SW	7	3		10						Snowing	Marks.
Irkutsk																			Usolzef.
Peking, (China)			30.66	778.8	15.8	— 9.0	24	NW	31	14		0							Physical Observatory.
Nertchinsk																			Meteorological Obs.
Vladivostock																			
Nikolaievsk, on the Amoor																			

NOTE.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols; they omit the rain-fall. The elevation of Tiflis is 409 meters, or 1,341.8 feet; Ekaterinburg, 306.4? m., or 1,005.2? ft.; Tashkend, 494.2? m., or 1,621.3? ft.; Irkutsk, 392 m., or 1,286 ft.; Nertchinsk, 592.0? m., or 1,942.2? ft.

SPANISH SERIES.

Furnished by the cooperation of Antonio Aguilar, Director of the Royal Observatory at Madrid, and of Don Cecilio Pujazon, Captain R. N. Director of the Naval Observatory at San Fernando.

Madrid			30.07	763.8	59.9	15.5	37	NE	17.9	8.00		0	0			0	0	Clear	Royal Observatory.
San Fernando			29.98	761.5	57.6	14.2	67	NE	5.8	2.6		0	10		NE	0.008	0.2		Naval Observatory.

NOTE.—The originals give the weather in general terms, as published; rain-fall for San Fernando from preceding to following midnight; wind-velocity for Madrid in kilometers per hour.

SWEDISH SERIES.

Furnished by the coöperation of Professor R. Rubenson, Director of the Royal Swedish Meteorological Institute, at Stockholm, and of Dr. H. H. Hildebrandsson, Chief of the Meteorological Division of the Upsala Observatory.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Haparanda	.....	.....	30.35	771.0	—14.1	—25.6	81	Calm	.....	.....	0	.....	10	.....	.....	0	0	Foggy	
Umea	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Hernosand	.....	.....	30.15	765.7	2.8	—16.2	95	NE	.....	.....	6	.....	8	.....	.....	0.008	0.2	.....	
Stockholm	.....	.....	29.68	753.9	26.6	— 3.0	83	NW	.....	.....	2	.....	10	.....	.....	0.280	7.1	.....	
Wisby	.....	.....	29.73	755.2	37.0	2.8	89	WSW	.....	.....	4	.....	10	.....	.....	0.055	1.4	.....	
Sub-Series.																			
Upsala	.....	.....	29.70	754.3	23.7	— 4.6	96	NNE	6.0	2.7	.....	.....	10	.....	.....	0.033	0.85	.....	Dr. Hildebrandsson.

Note.—The originals give the wind-force by the scale 0 to 6, and Upsala also velocity in meters per second; occasionally, the weather by the Vienna symbols, or in general terms; no distinction between the amount of upper and lower clouds. The rain-fall is measured at 8 a. m., local time.

SWISS SERIES.

Furnished by the coöperation of Professor R. Wolf, Director of the Observatory at Zurich, and of Professor E. Plantamour, Director of the Observatory at Geneva.

Geneva	28.02	727.0	30.08	764.1	43.2	6.2	48	NNE	.....	.....	4	.....	3	.....	.....	0.382	9.7	Clouds	The Observatory.
Zurich	28.42	721.9	30.11	764.8	39.6	4.2	77	S	.....	.....	1	.....	10	.....	.....	0.020	0.5	Covered	The Observatory.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

Note.—For Geneva the corresponding departures from the normal values are: Barometer, +0.8 mm; Thermometer, +2.3 cent.; Relative Humidity, —23 per cent.

Note.—The rain-fall is measured at Zurich at 7 a. m. on the following day. The originals give the barometer corrected but not reduced to sea-level; the wind-force by the scale 0 to 4 for Zurich; the amount of cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The elevation of Geneva is 408 meters, or 1,339 feet, and that of Zurich 479 meters, or 1,542 feet.

TURKISH SERIES.

Furnished by the cooperation of A. Coumbary, Effendi, Director of the Central Observatory at Constantinople, and of Professor C. V. A. Van Dyck, Superintendent of the Lee Observatory at Beirut.

Constantinople	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Fao, (Persian Gulf)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Salonica	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Valona	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Varna	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y	.....	.....	29.95	760.6	54.9	12.7	81	S	.....	.....	3	.....	10n	.....	S	1.71	43.4	Overcast	Prof. C. V. A. Van Dyck.

Note.—The originals give the wind-force by the scale 0 to 7, (except Beirut, by the scale 0 to 12, and Constantinople velocity in meters per second;) the weather in general terms as published; no distinction between upper and lower clouds, and, except Constantinople and Beirut, the amount by the scale 0 to 4. It is assumed that the barometer is reduced to sea-level.

CANADIAN SERIES.

Furnished by the cooperation of Professor G. T. Kingston, Director of the Magnetic Observatory at Toronto, and Superintendent of the Meteorological Office of the Dominion of Canada, and the respective Observers. Those marked with a star (*) are also telegraphed daily to the office of the Chief Signal Officer, U. S. Army.

Bathurst, N. B	.....	.....	29.67	753.6	24.7	— 4.1	91	NE	8.5	3.8	.....	.....	.....	.....	.....	.....	.....	Snowing	Hon. J. Ferguson.
Brockville, Ontario	.....	.....	29.87	758.7	17	— 8.3	.....	W	1	0.4	.....	0	2s	.....	W	0.07	1.8	Fair	W. R. Bigg.
*Chatham, N. B	.....	.....	29.70	754.4	27	— 2.8	96	NE	9	4.0	.....	.....	10s	.....	NE	0.02	0.5	Light snow	G. A. Blair.
Charlottetown, P. E. Island	.....	.....	29.78	756.4	32	0.0	98	NE	3	1.3	.....	.....	10s	.....	.....	0	0	Cloudy	H. J. Cundall, C. E.
Cornwall, Ontario	.....	.....	29.81	757.2	17.9	— 7.8	79	W	.....	.....	1	.....	10s	.....	.....	0	0	Dull	James Smith, M. A.
Dalhousie, N. B	.....	.....	29.60	751.8	24.5	— 4.2	100	E	.....	.....	1	.....	.....	.....	.....	0.40	10.2	Snowing	H. A. Johnson.
Esquimault, B. C	.....	.....	29.98	761.5	38.6	3.7	77	N	.....	.....	.....	3k	0	.....	.....	0	0	Cloudy	W. H. Bevis.
*Father Point, Quebec	.....	.....	29.70	754.4	23	— 5.0	89	SE	1	0.4	.....	.....	10n	.....	.....	0.03	0.8	Cloudy	J. McWilliams.
Fredericton, N. B	.....	.....	29.65	753.1	32.0	0.0	95	NE	6	2.7	.....	.....	10n	.....	.....	0.14	3.6	Stormy	Prof. Harrison.
*Fort Garry, Manitoba	.....	.....	30.24	768.1	12	—11.1	94	S	14	6.3	.....	5k	5ks	S	S	0	0	Cloudy	James Stewart.
Goderich, Ontario	.....	.....	30.09	764.3	19.6	— 6.9	86	NW	.....	.....	4	.....	10n	.....	.....	0.05	1.3	Snowing	H. J. Strang, M. A.
Granton, Ontario	28.85	732.8	30.03	762.7	18.3	— 7.6	.....	NW	.....	.....	2	.....	10n	.....	.....	Inap.	Inap	Snowing	James Grant.
*Halifax, N. S	.....	.....	29.66	753.4	34	1.1	98	SE	10	4.5	.....	.....	10n	.....	.....	0.020	0.51	Heavy rain	F. Allison, M. A.
Hamilton, Ontario	.....	.....	30.03	762.7	21.7	— 5.7	78	SW	.....	.....	2	10cs	0	.....	.....	Inap.	Inap.	Cloudy	G. Dickson.
Heart's Content, N. F	.....	.....	30.25	768.3	13	—10.6	100	Calm	.....	.....	0	0	0	.....	.....	0	0	Fine	E. Weedon.
*Kingston, Ontario	.....	.....	29.92	760.0	17	— 8.3	94	Calm	0	0	.....	5ck	0	W	.....	Inap.	Inap.	Fair	S. Woods, M. A.
*Montreal, Quebec	.....	.....	29.77	756.1	16	— 8.9	75	W	13	5.8	.....	0	2ks	.....	.....	0.08	2.0	Clear	C. H. McLeod, C. E.
*Ottawa, Ontario	.....	.....	29.82	757.4	14	—10.0	72	W	10	4.5	.....	.....	10ks	.....	W	0.05	1.3	Cloudy	J. B. Haney.
*Parry Sound, Ontario	.....	.....	30.04	763.0	7	—13.9	73	NW	12	5.4	.....	0	2ks	.....	NW	0.15	3.8	Fair	Rev. R. Mosley.
Port Dover, Ontario	.....	.....	30.03	762.7	21	— 6.1	85	W	10	4.5	.....	.....	10n	.....	W	Inap.	Inap.	Light snow	H. Morgan.
Port Hastings, N. S	.....	.....	29.91	759.7	30.7	— 0.7	.....	SE	16	7.2	.....	.....	.....	.....	.....	0.75	19.1	Fine	Peter Grant.
Port Stanley, Ontario	.....	.....	30.10	764.5	19	— 7.2	84	W	12	5.4	.....	.....	10n	.....	W	Inap.	Inap.	Light snow	M. Payne.
*Quebec, Quebec	.....	.....	29 60	754.1	25	— 3.9	87	SW	20	8.9	.....	.....	10n	.....	SW	0.05	1.3	Cloudy	Capt. Ashe, R. N.
*Rockliffe, Ontario	.....	.....	29.94	760.5	8	—13.3	80	NW	8	3.6	.....	5cs	2s	.....	NW	0	0	Fair	
St. John, N. B	.....	.....	29.61	752.1	33	0.6	94	NE	4	1.8	.....	.....	10n	.....	.....	1.69	42.9	Light snow	G. Murdoch, C. E.
*Saugeen, Ontario	.....	.....	30.04	763.0	15	— 9.4	73	N	7	3.1	.....	.....	10s	.....	.....	0.07	1.8	Light snow	K. Stewart.
Stayner, Ontario	.....	.....	30.02	762.5	12	—11.1	83	N	15	6.7	.....	.....	10n	.....	N	Inap.	Inap.	Cloudy	R. J. Cole.
Stratford, Ontario	28.63	727.2	29.99	761.7	18.0	— 7.8	89	NW	15	6.7	.....	.....	10n	.....	.....	.....	.....	Snowing	C. J. MacGregor, M. A.
*Sydney, C. B	.....	.....	29.97	761.2	27	— 2.8	97	Ca'm	0	0	.....	.....	Fog	.....	.....	0	0	Foggy	T. C. Hill.
*Toronto, Ontario	.....	.....	29.97	761.2	20	— 6.7	82	NW	7	3.1	.....	.....	8n	.....	.....	0.01	0.3	Cloudy	Magnetic Observatory.
Woodstock, Ontario	.....	.....	30.03	762.7	19.8	— 6.8	99	W	15	6.7	.....	.....	10s	.....	.....	0.01	0.3	Cloudy	J. Montgomery.
Sub-Series.																			
St. Johns, Newfoundland	.....	.....	30.34	770.6	13.0	—10.6	.....	Calm	.....	.....	.....	Sm'e	10s	.....	.....	Inap.	Inap.	Fair	John Delany.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

Note.—The originals for Brockville, Charlottetown, Port Dover, Port Stanley, Stayner, St. Johns, N. F. and those telegraphed, give the amount of cloudiness by the scale 0 to 4. The elevation of Granton is 1,015 feet, or 309.4 m.; Stratford, 1,182 feet, or 360.3 m

UNITED STATES SERIES.

Furnished by the cooperation of Bvt. Brig. Gen. Albert J. Myer, Chief Signal Officer, U. S. Army.

STATIONS.	Barometer: Corrected for instrum'tal error and temperature. Inches.	Barometer: Corrected for instrum'tal error and temperature. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain or melted snow in the past 24 hours. Inches.	Rain or melted snow in the past 24 hours. Millimeters.	Weather	Observer.
Albany, N. Y.	.....	.....	29.79	756.7	24	— 4.4	74	Calm	0	0	.....	0	0	.....	.....	0.07	1.8	Clear	
Alpena, Mich.	.....	.....	30.14	765.5	13	—10.6	81	NW	15	6.7	.....	.....	10n	.....	NW	0.05	1.3	Light snow..	
Atlantic City, N. J.	.....	.....	29.88	758.9	32	0.0	60	NW	18	8.0	.....	8c	0	SW	.....	0	0	Cloudy	
Augusta, Ga.	.....	.....	30.18	766.6	38	3.3	86	NW	6	2.7	.....	0	0	.....	.....	0.01	0.3	Clear	
Baltimore, Md.	.....	.....	30.01	762.2	31	— 0.6	68	NW	8	3.6	.....	2ck	2s	.....	NW	0	0	Fair	
Barnegat, N. J.	.....	.....	29.85	758.2	32	0.0	79	NW	22	9.8	.....	8cs	2k	SW	NW	0	0	Fair	
Bismarck, Dakota	28.30	718.8	30.06	763.5	18	— 7.8	68	NE	1	0.4	.....	0	0	.....	.....	0	0	Clear	
Boston, Mass.	.....	.....	29.66	750.8	34	1.1	61	NW	32	14.3	.....	2cs	7s,hz.	W	SW	Inap.	Inap.	Cloudy	
Breckenridge, Minn.	.....	.....	30.28	769.1	8	—13.3	78	SE	10	4.5	.....	0	1s	.....	.....	0	0	Clear	
Buffalo, N. Y.	.....	.....	29.95	760.7	21	— 6.1	85	W	19	8.5	.....	.....	10s	.....	W	0	0	Cloudy	
Burlington, Vt.	.....	.....	29.79	756.7	23	— 5.0	60	W	3	1.3	.....	0	2s	.....	.....	0	0	Fair	
Cairo, Ill.	.....	.....	30.38	771.6	29	— 1.7	78	S	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Cape Hatteras, N. C.	.....	.....	29.88	758.9	46	7.8	76	NW	12	5.4	.....	.....	10ks	.....	NW	2.34	59.4	Cloudy	
Cape Henry, Va.	.....	.....	30.00	762.0	30	— 2.2	81	N	40	17.9	.....	8ck	2s	NW	NW	0.20	5.1	Cloudy	
Cape Lookout, N. C.	.....	.....	29.99	761.7	45	7.2	67	NW	20	8.9	.....	0	5s	.....	.....	2.05	52.1	Fair	
Cape May, N. J.	.....	.....	29.92	760.0	31	— 0.6	49	NW	44	19.7	.....	0	5s	.....	W	0	0	Fair	
Charleston, S. C.	.....	.....	30.12	765.0	45	7.2	84	W	10	4.5	.....	1cs	0	.....	.....	0.05	1.3	Clear	
Cheyenne, Wyoming	24.19	614.4	30.18	766.3	24	— 4.4	48	W	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Chicago, Ill.	.....	.....	30.27	768.8	21	— 6.1	71	NW	6	2.7	.....	0	0	.....	.....	0	0	Clear	
Cincinnati, Ohio	.....	.....	30.17	766.3	32	0.0	60	NW	8	3.6	.....	8k	Sm'c	NW	NW	0	0	Fair	
Cleveland, Ohio	.....	.....	30.12	765.0	23	— 5.0	79	W	16	7.2	.....	5k	5s	W	W	0	0	Threatening	
Corsicana, Tex.	.....	.....	30.48	774.2	41	5.0	91	Calm	0	0	.....	2ck	8s	.....	.....	0	0	Cloudy	
Davenport, Iowa	.....	.....	30.34	770.6	26	— 3.3	88	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Denison, Tex.	.....	.....	30.54	775.7	35	1.7	89	NW	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Denver, Col.	25.00	635.0	30.22	767.6	25	— 3.9	75	S	5	2.2	.....	0	0	.....	.....	0	0	Clear	
Detroit, Mich.	.....	.....	30.11	764.8	20	— 6.7	70	W	6	2.7	.....	0	0	.....	.....	0	0	Clear	
Dodge City, Kan.	27.72	704.1	30.17	766.3	28	— 2.2	88	SW	2	0.9	.....	0	0	.....	.....	0	0	Clear	
Dubuque, Iowa	.....	.....	30.34	770.6	23	— 5.0	73	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Duluth, Minn.	.....	.....	30.36	771.1	8	—13.3	78	NW	4	1.8	.....	5c	0	.....	.....	0	0	Fair	
Eastport, Me.	.....	.....	29.52	749.8	32	0.0	100	E	15	6.7	.....	.....	10n	.....	.....	0.17	4.3	Heavy snow	
Erie, Pa.	.....	.....	30.06	763.5	20	— 6.7	85	W	14	6.3	.....	.....	10ks	.....	NW	0	0	Cloudy	
Escanaba, Mich.	.....	.....	30.26	768.6	15	— 9.4	64	NW	14	6.3	.....	.....	10s	.....	NW	0	0	Cloudy	
Fort Gibson, Indian Ter.	.....	.....	30.46	773.7	26	— 3.3	88	E	4	1.8	.....	0	Fog	.....	.....	0	0	Clear	
Ft. St. Michael, Alaska	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Fort Sill, Indian Ter.	29.23	742.4	30.42	772.7	34	1.1	61	NE	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Fort Sully, Dakota	28.46	722.9	30.23	767.8	26	— 3.3	76	SE	2	0.9	.....	0	0	.....	.....	0	0	Clear	
Florence, Arizona	28.53	724.6	30.04	763.0	58	14.4	.....	NW	.....	.....	.....	.....	10s	.....	NW	0	0	Cloudy	
Galveston, Tex.	.....	.....	30.48	774.2	49	9.4	93	N	8	3.6	.....	.....	10s	.....	NE	0	0	Cloudy	
Grand Haven, Mich.	.....	.....	30.19	766.8	23	— 5.0	73	N	10	4.5	.....	0	9s	.....	NW	0	0	Cloudy	
Indianapolis, Ind.	.....	.....	30.23	767.9	30	— 1.1	59	NW	1	0.4	.....	0	0	.....	.....	0	0	Clear	
Indianola, Tex.	.....	.....	30.30	774.7	48	8.9	77	N	15	6.7	.....	.....	10s	.....	N	0.03	0.8	Cloudy	
Jacksonville, Fla.	.....	.....	30.20	767.1	46	7.8	76	NW	5	2.2	.....	0	0	.....	.....	0.04	1.0	Clear	
Keokuk, Iowa	.....	.....	30.28	769.1	31	— 0.6	79	NW	2	0.9	.....	0	0	.....	.....	0	0	Clear	
Key West, Fla.	.....	.....	30.18	766.6	62	16.7	83	N	20	8.9	.....	0	8ks	.....	N	0	0	Cloudy	
Kittyhawk, N. C.	.....	.....	30.01	762.2	37	2.8	62	N	48	21.5	.....	.....	10ks	.....	N	0.49	17.5	Cloudy	
Knoxville, Tenn.	.....	.....	30.32	770.1	31	— 0.6	41	SW	4	1.8	.....	0	0	.....	.....	Inap.	Inap.	Clear	
La Crosse, Wis.	.....	.....	30.34	770.6	20	— 6.7	70	N	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Leavenworth, Kan.	.....	.....	30.32	770 1	38	3.3	71	NW	8	3.6	.....	0	0	.....	.....	0	0	Clear	
Louisville, Ky.	.....	.....	30.25	768.3	34	1.1	79	SW	8	3.6	.....	.....	8s	.....	SW	0	0	Cloudy	
Lynchburg, Va.	.....	.....	30.10	764.5	33	0.6	50	W	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Malone, N. Y.	.....	.....	29.77	756.1	18	— 7.8	84	W	6	2.7	.....	8k	0	W	.....	0.07	1.8	Cloudy	
Marquette, Mich.	.....	.....	30.22	767.6	14	—10.0	64	NW	12	5.4	.....	.....	10s	.....	.....	0	0	Cloudy	
Memphis, Tenn.	.....	.....	30.44	773.2	32	0.0	89	NW	2	0.9	.....	.....	Fog	.....	.....	0	0	Foggy	
Milwaukee, Wis.	.....	.....	30.30	769.6	15	— 9.4	75	NW	5	2.2	.....	0	0	.....	.....	0	0	Clear	
Mobile Ala.	.....	.....	30.37	771.4	42	5.6	83	N	6	2.7	.....	0	0	.....	.....	0	0	Fair	
Montgomery, Ala.	.....	.....	30.37	771.4	40	4.4	63	NW	6	2.7	.....	0	0	.....	.....	0	0	Clear	
Morgantown, W. Va.	29.0..	736.6	30.11	764.8	27	— 2.8	54	W	9	4.0	.....	0	0	.....	.....	0	0	Clear	
Mt. Washington, N. H.	23.16	588.2	29.52	749.8	3	—16.1	100	N	24	10.7	.....	.....	10n	.....	N	0.12	3.0	Light snow..	
Nashville, Tenn.	.....	.....	30.36	771.1	30	— 1.1	78	NW	1	0.4	.....	0	Fog	.....	.....	0	0	Clear	
New Haven, Conn.	.....	.....	29.78	756.4	29	— 1.7	59	NW	20	8.9	.....	5ck	Haze	NW	.....	Inap.	Inap.	Fair	
New London, Conn.	.....	.....	29.70	754.4	32	0.0	60	NW	23	10.3	.....	0	1s	.....	.....	Inap.	Inap.	Clear	
New Orleans, La.	.....	.....	30.41	772.4	47	8.3	77	N	6	2.7	.....	9cs	0	W	.....	0	0	Cloudy	
Newport, R. I.	.....	.....	29.62	752.3	35	1.7	69	NW	20	8.9	.....	0	8ks	.....	NW	0	0	Cloudy	
New York, N. Y.	.....	.....	29.85	758.2	30	— 1.1	68	W	14	6.3	.....	2ck	0	SW	.....	Inap.	Inap.	Clear	
Norfolk, Va.	.....	.....	30.04	763.0	34	1.1	45	N	20	8.9	.....	10k	0	SW	.....	0.15	3.8	Cloudy	
North Platte, Neb.	27.18	690.4	29.88	758.9	25	— 3.9	88	W	10	4.5	.....	0	0	.....	.....	0	0	Clear	
Omaha, Neb.	29.13	739.9	30.28	769.1	30	— 1.1	78	NW	2	0.9	.....	0	0	.....	.....	0	0	Clear	
Oswego, N. Y.	.....	.....	29.88	758.9	25	— 3.9	88	NW	16	7.2	.....	0	8s	.....	NW	0.01	0.3	Clearing	
Pembina, Dakota	.....	.....	30.12	765.0	9	—12.8	89	S	8	3.6	.....	10k	0	NW	.....	0	0	Cloudy	
Philadelphia, Pa.	.....	.....	29.93	760.2	29	— 1.7	68	N	24	10.7	.....	2k	2s	W	.....	0	0	Fair	
Pike's Peak, Col.	17.84	453.1	30.05	763.3	8	—13.3	33	W	6	2.7	.....	0	0	.....	.....	0	0	Clear	
Pittsburgh, Pa.	.....	.....	30.06	763.5	24	— 4.4	67	NW	9	4.0	.....	0	0	.....	.....	0	0	Clear	
Port Huron, Mich.	.....	.....	30.09	764.3	17	— 8.3	83	W	4	1.8	.....	.....	10s	.....	NW	0	0	Cloudy	
Portland, Me.	.....	.....	29.52	749.8	33	0.6	89	NW	20	8.9	.....	.....	10s	.....	NW	0.02	0.5	Cloudy	
Portland, Oregon	.....	.....	30.09	764.3	37	2.8	90	S	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Punta Rassa, Fla.	.....	.....	30.22	767.6	57.6	14.2	72	N	18	8.0	.....	0	8ks	.....	N	0.85	21.6	Fair	
Rochester, N. Y.	.....	.....	29.90	759.4	20	— 6.7	91	W	16	7.2	.....	0	8n	.....	W	0 06	1.5	Heavy snow	
Salt Lake City, Utah	25.93	658.6	30.26	768.6	28	— 2.2	77	NW	2	0.9	.....	0	0	.....	.....	0	0	Clear	
Sandy Hook, N. J.	.....	.....	29.85	758.2	31	— 0.6	59	NW	30	13.4	.....	0	5ks	.....	NW	0	0	Fair	
San Diego, Cal.	.....	.....	30.15	765.8	50	10.0	93	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
San Francisco, Cal.	.....	.....	30.10	764.5	53	11.7	79	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Santa Fé, N. M.	23.45	595.6	29.99	761.7	25	— 3.9	75	N	12	5.4	.....	.....	10s	.....	N	Inap.	Inap.	Cloudy	
Savannah, Ga.	.....	.....	30.17	766.3	44	6.7	75	NW	11	4.9	.....	Haze	Sm'c	.....	.....	0	0	Clear	
Shreveport, La.	.....	.....	30.52	775.2	44	6.7	84	N	2	0.9	.....	8cs	0	.....	.....	0	0	Fair	
Smithville, N. C.	.....	.....	30.04	763.0	45	7.2	75	N	4	1.8	.....	0	1ks	.....	W	1.11	28.2	Clearing	
Springfield, Mass.	.....	.....	29.74	755.4	32	0.0	49	NW	14	6.3	.....	5ck	0	W	.....	0	0	Fair	
St. Louis, Mo.	.....	.....	30.32	770.1	34	1.1	71	NW	12	5.4	.....	0	0	.....	.....	0	0	Clear	
St. Marks, Fla.	.....	.....	30.26	768.6	42	5.6	96	NW	6	2.7	.....	5c	0	NW	.....	0.05	1.3	Fair	
St. Paul, Minn.	.....	.....	30.31	769.9	18	— 7.2	69	Calm	0	0	.....	2c	0	.....	.....	0	0	Fair	
St. Paul's Island, Alaska	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Thatcher's Island, Mass.	.....	.....	29.55	750.6	34	1.1	79	NW	28	12.5	.....	.....	10s	.....	N	0	0	Cloudy	
Toledo, Ohio	.....	.....	30.16	766.1	25	— 3.9	75	SW	4	1.8	.....	.....	Haz	.....	.....	0	0	Hazy	
Tucson, Arizona	27.67	702.8	30.22	767.6	46	7.8	.....	S	.....	.....	.....	0	0	SW	.....	Inap.	Inap.	Cloudy	
Tybee Island, Ga.	.....	.....	30.14	765.5	43	6.1	83	NW	16	7.2	.....	10k	0	.....	.....	0	0	Clear	
Vicksburg, Miss.	.....	.....	30.48	774.2	40	4.4	90	Calm	0	0	.....	0	0	.....	.....	0	0	Fair	
Virginia City, M. T.	24.43	620.5	29.91	759.7	21	— 6.1	57	Calm	0	0	.....	9c,cs	0	W	.....	0	0	Fair	
Washington, D. C.	.....	.....	30.05	763.3	29	— 1.7	59	NW	6	2.7	.....	0	0	.....	.....	0	0	Clear	
Wilmington, N. C.	.....	.....	30.04	763.0	43	6.1	66	NW	9	4.0	.....	2cs	1s	SW	.....	0	0	Fair	
	.....	.....	.....	.....	.....	.....	.....	NW	9	4.0	.....	0	0	W	.....	0.51	13.0	Fair	

UNITED STATES SERIES.—CONTINUED.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. U'per. 0—10.	Clouds. Amount. Low'r. 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Wood's Holl, Mass.	.....	.....	29.58	751.3	35	1.7	80	NW	14	6.3	.....	.....	10s	.....	NW	0.26	6.6	Cloudy.	
Yankton, Dakota	28.96	735 6	30.36	771.1	20	— 6.7	70	E	2	0.9	.....	0	0	.....	.....	0	0	Clear	
Yuma, Arizona	.....	.....	30.09	764.3	60	15.6	.....	NW	.....	.....	.....	2c	5s	N	N	0	0	Fair	
Sub-Series.																			
Kingston, Jamaica, W. I.	.....	.....	30.25	768.3	75	23.9	72	N	6	2.7	.....	2c	2s	.....	.....	0	0	.....	James Gall.
Navassa, W. I.	.....	.....	.....	.....	78	25.6	.....	NE	.....	.....	1	.....	.....	.....	.....	0	0	.....	Dr. G. H. Davison.
Clifton, Ja., W. I.	27.22	691.4	30.04	763.0	62	16.7	83	N	3.0	1.3	.....	5c	5k	N	.....	0	0	Fine	C. Partridge.
Paramaribo, D. Guiana, S.A.	.....	.....	30.06	763.5	82	27.8	83	E	.....	.....	3	3c	5k	E	.....	0	0	Fair	C. J. Hering.
Batavia, Dutch Guiana, S.A.	30.07	763.7	.....	.....	78.8	26	.....	E	.....	.....	.....	.....	.....	.....	.....	0	0	Fair	Dr. H. Groot.
Medellin, Colombia, S. A.	25.25	641.3	.....	.....	68.4	20.2	76	Calm	.....	.....	0	6k	2ks	.....	.....	0	0	Cloudy	Thomas Herran.
York Factory, B. A.	.....	.....	30.19	766.8	—27.0	—32.8	.....	N	18	8.0	.....	.....	10n	.....	.....	0.07	1.8	Snowing	J. Fortescue, W. Wood
Honolulu, Oahu, H. I.	.....	.....	30.09	764.3	68	20.0	95	Calm	.....	.....	0	.....	.....	.....	.....	0	0	Clear	Daniel Smith.
Makawao, Maui, H. I.	.....	.....	29.95	760.7	61	16.1	77	Calm	.....	.....	0	0	1k	.....	.....	0	0	.....	F. L. Clarke.

NOTE.—The originals give the amount of cloudiness by the scale 0 to 4, except York Factory, Makawao, Medellin and Paramaribo. The elevation of the barometer at Bismarck is 1,677 feet, or 511.1 meters; Cheyenne, 6,057.8 ft., or 1,846.2 m.; Clifton, about 2,662 ft., or 811.5 m.; Denver, 5,185 ft., or 1,565.2 m.; Fodge City, 2486ft., or 757.5 m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Florence, 1,550 (?) ft., or 472.5 (?) m.; Makawao, 2,207 ft., or 672.1 m.; Morgantown, 1,027.9 ft., or 313.3 m.; Medellin, 4,876 ft., or 1,486.2 m.; Mt. Washington, 6,285 ft., or 1,915.6 m.; North Platte, 2,846 ft., or 867.4 m.; Omaha, 1,054.6 ft., or 321.4 m.; Pike's Peak, 14,150.7 ft., or 4,313.1 m.; Salt Lake City, 4,362.2 ft., or 1,329.6 m.; Santa Fé, 6,862.2 (?) ft., or 2,091.6 (?) m.; Tucson, 2,545 (?) ft., or 775.7 (?) m.; Virginia City, 5,480 (?) ft., or 1,670.3 (?) m.; Yankton, 1,278 ft., or 389.5 m. The following constants are added in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Denver, 5.22 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fé, 6.64 in.; Tucson, 2.69 in.; Virginia City, 5.48 in. The elevation of Batavia is about 6 feet; the barometric readings need the addition of 0.2 mm. or 0.01 in. for reduction to sea-level.

UNITED STATES NAVAL SERIES.

By authority of the **SECRETARY OF THE NAVY.**

Furnished by the coöperation of the Navy Department, through Commodore Daniel Ammen, U. S. N., Chief of Bureau of Navigation.

STATIONS AND VESSELS.	TRUE COURSE TOWARD—	HOURLY RATE IN KNOTS.	*BAROMETER AS REPORTED.		TEMPERATURE OF THE AIR.		RELATIVE HUMIDITY.	WIND.			CLOUDS.				RAIN-FALL OR MELTED SNOW IN THE PAST 24 HOURS.		STATE OF OCEAN.	DIRECTION OF SWELL FROM—	WEATHER.	OBSERVER.
								Direction.	Velocity		Amount.		Direction.							
			Inches.	Millimeters.	Fahrenheit.	Centigrade.	Per cent.	From—	Miles per hour.	Meters per second.	Force. 0—10.	Up'er 0—10.	Low'r 0—10.	Up'er From—	Low'r From—	Inches.	Millimeters.				
Naval Academy, Annapolis, Md.			29.67	753.6	30	— 1.1	46	NW			5		6			0	0			Cloudy	
Naval Hospital, Annapolis, Md.			30.03	762.7	29	— 1.7	56	NW			4		7		NW	0	0			Cloudy	
Navy Yard, Mare Island, Cal.			30.19	766.8	50	10.0		E			1		0			0	0			Fair	
Navy Yard, Norfolk, Va.			30 12†	765.0†	34	1.1	100	NNW	14	6.3			9kn			0.10	2.5			‡D. clouds	
Navy Yard, Pensacola, Fla.			30.39	771.9	43	6.1		NNW			3		6		SE	0	0			‡D. clouds	
Navy Yard, Portsmouth, N.H.			29.55	750.6	31.5	— 0.3		NW	9	4.0			10			0.01	0.3			Light snow	
¶ Canonicus, New Orleans, La.			30.35	770.9	47	8.3	55	N			3		10		E					Cloudy	
Colorado, New York, N. Y.			29.90	759.4	32	0.0		NW	8	3.6			1		S&E	0	0			‡D. clouds	
Essex, N. 24°, 15′, W. 86°, 8′			30.24	768.1	73	22.8	81	NNW			5		8		SE			Smooth	NNW	‡D. clouds	
Hartford, Hampton Roads, Va.			30.12	765.0	37	2.8		NNW			6		9		S	0	0			Pleasant	
Lackawanna, Mare Island, Cal.			30.21	767.3	54	12.2	93	Calm			0							Smooth		Blue sky	
Marion, Port Said, Egypt			29.99	761.7	56	13.3	87	WNW			3		6		E	Blank	Blank	Rough.	NW	‡D. clouds	
Michigan, Erie, Pa.			29.51	749.5	21	— 6.1	86	WNW			2		10		NW					Cloudy	
Monongahela, Baltimore, Md.			29.96	761.0	32	0.0		W			2		..ks							‡D. clouds	
New Hampshire, Port Royal, S. C.			30.32	770.1	57	13.9		NW			2–4		1		NE					‡D. clouds	
Omaha, Panama			30.06	763.5	76	24.4	93	NW			2		4			0	0	Smooth		Clear	
Ossipee, Pensacola, Fla.			30.41	772.4	48	8.8		N			2		2							‡D. clouds	
Pensacola, Panama			30.05	763.3	77	25.0	91	NNW			3		3			0	0			Pleasant	
Plymouth, New Orleans, La.			30.42	772.7				N			4		7		N					Cloudy	
¶ Rio Bravo, Matamoras, Mex.			30.18	766.6	48	8.8		NW			2		10							Raining	
Santee, Annapolis, Md.			30.04	763.0	32	0.0		NW			5		6							Cloudy	
St. Louis, League Island, Pa.			29.81	757.2	30	— 1.1		NW	24	10.7			3		NE	0	0			Fair	
Vandalia, Constantinople, Turkey.			30.27	768.8	48	8.8	92	SSW			1		0							Blue sky	
Wabash, Boston, Mass.			29.62	752.3	35	1.7		NW	24	10.7			1		SE	0	0			Squally	
Wyoming, Washington, D. C.					30	— 1.1		NW			3		1								

* It is not known that the barometer is corrected for temperature, instrumental error or elevation. † Aneroid Barometer. ‡ Detached clouds. ¶ Barometer corrected for instrumental error and reduced to sea-level.

UNITED STATES MARINE SERIES

REPORTED TO THE OFFICE OF THE CHIEF SIGNAL OFFICER OF THE ARMY.

NAMES OF VESSELS.	TRUE COURSE TOWARD—	HOURLY RATE IN KNOTS.	BAROMETER REDUCED TO SEA-LEVEL.		TEMPERATURE OF THE AIR.		RELATIVE HUMIDITY.	WIND.				CLOUDS.				STATE OF OCEAN.	DIRECTION OF SWELL FROM—	WEATHER.	OBSERVER.
								Direction.	Velocity.		Force.	Amount.		Direction.					
												Up'er	Low'r	Upper.	Lower.				
			Inches.	Millimeters.	Fahrenheit.	Centigrade.	Per cent.	From—	Miles per hour.	Meters per second.	0—10.	0—10.	0—10.	From—	From—				

PACIFIC MAIL S. S. CO. MARINE SERIES.

Furnished by the coöperation of ————, President; Williams, Blanchard & Co., Agents.

S. S. City of Peking																			Lt. Z. L. Tanner, U.S.N

OCCIDENTAL AND ORIENTAL S. S. CO. MARINE SERIES.

Furnished by the coöperation of George H. Bradbury, President; T. H. Goodman, Agent.

S. S. Belgic																			Capt. John Metcalf.
S. S. Gaelic																			Capt. W. H. Kidley.
S. S. Oceanic																			Capt. H. Parsell.

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S. S. Baltimore																			Capt. H. Andressen.
S. S. Berlin																			Capt. C. Pohle.
S. S. Braunschweig																			Capt. K. Undütsch.
S. S. Nürnberg N. 47°, 58′, W. 26°, 2′	E by N		30.22	767 6	51.1	10.6		NW			5		c		NW	Swell.	W	Clearing	Capt. A. Jaeger. Capt. G. Meyer.
S. S. Ohio																			

MARINE SERIES. (Miscellaneous.)

Furnished by the coöperation of the Observer named.

Schooner Addie Fuller, N. 32°, 03′, W. 80°, 20′	NNE	7	30.04	763.0	48	8.9	85	NW	17	7.6		0	0			Rough		Clear	Capt. James Jorgensen

NOTE.—The schooner Addie Fuller gives the amount of cloudiness by the scale 0 to 4.

COLLATED AT THE OFFICE OF THE CHIEF SIGNAL OFFICER OF THE ARMY, WASHINGTON, D. C.

The records which appear in this Bulletin are copied from the regular exchanges of this office, made in each instance in compliance with an especial request and are published for the uses of the coöperating observers. The barometric readings in the first two columns are reduced to freezing and their respective standards; those in the second two also to mean sea-level. The "weather" is generally published as given.

When the distinction between the upper and lower strata of clouds is not reported, the *kinds* or *types*, viz: cirrus, cumulus, stratus, nimbus, scud, fracto, pallio, haze, fog and smoke, as indicated, respectively, by the letters c, k, s, n, d, f, p, hz., fg, and sm'e, are generally published with the amount in the lower-cloud column. The distinction between the upper and lower strata is carefully made in the United States Series and a portion of the Canadian Series, and the types are indicated by the above letters or their combinations in the proper column.

Albert J. Myer

Brig. Gen. (Bvt. Assg^{d}.) Chief Signal Officer, U. S. A.

BULLETIN

OF

INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON FEBRUARY 18, 1877.

7:35 A. M. WASHINGTON mean time.

6:7 A. M. MEXICO mean time.
7:7 A. M. SAN JOSE mean time.
0:6 P. M. LISBON mean time.
0:28 P. M. MADRID mean time.
0:43 P. M. GREENWICH mean time.
0:53 P. M. PARIS mean time.
1:1 P. M. BRUSSELS mean time.
1:4 P. M. UTRECHT mean time.
1:18 P. M. BERNE mean time.
1:26 P. M. CHRISTIANIA mean time.
1:33 P. M. COPENHAGEN mean time.
1:33 P. M. ROME mean time.
1:37 P. M. BERLIN mean time.
1:49 P. M. VIENNA mean time.
1:55 P. M. STOCKHOLM mean time.
2:18 P. M. ATHENS mean time.
2:39 P. M. CONSTANTINOPLE mean time.
2:44 P. M. ST. PETERSBURG mean time.
6:36 P. M. CALCUTTA mean time.
10:2 P. M. TOKEI mean time.

ALGERIAN SERIES.

Furnished by the coöperation of General d'Eudeville, Commandant Supérieur du Génie in Algeria.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Nemours			30.14	765.5	62.8	17.1		ESE			4		6			0.118	3.0	Fair	Michel.
Algiers			30.14	765.6	72.5	22.5		ENE			5		10			0	0	Hidden	Biscarrat.
La Calle			30.09	764.2	66.2	19.0		SSE			3		1			0	0	Clear	Fleury.
Tunis			30.16	766.1	69.8	21.0		WSW			2		2			0	0	Clear	Jacques.
Sfax																			
Saida			30.05	763.2	64.6	18.1		SSE			3		6			0	0	Fair	Millot.
Tebessa			30.07	763.7	59.0	15.0		W			2		0			0	0	Clear	Bourgeois.
Gerlville			30.05	763.2	51.8	11.0		SE			5		5			0	0	Clear	Lemaillot.
Laghouat			29.95	760.6	61.0	16.1		E			5		8			0	0	Fair	Guyot.
Biskra			30.00	762.0												0	0		Kuntz.

NOTE.—In the originals the distinction between the amount of upper and lower clouds is apparently not made. The weather is published as given. The rain-fall is measured at 7 a. m., local time.

AUSTRIAN SERIES.

Furnished by the coöperation of Professor Dr. Julius Hann, Director of the Imperial and Royal Central Meteorological Institute at Vienna.

Agram			30.04	763.0	40.3	4.6	78	NE			2		10			0.177	4.5	Raining	Prof. Ivan Stozir.
Cracow, I. R. Observatory			30.11	764.9	35.6	2.0	96	W			1		10			0.114	2.9		Dr. Wierzbiski.
Eperies			30.04	762.9	38.3	3.5	95	Calm			0		10			0.043	1.10	Foggy	Julius Mikolik.
Gratz	28.79	731.3	30.07	763.8	42.8	6.0	73	S			2		9			0.551	14.0		Andreas Rospini.
Hermannstadt	28.52	724.5	29.98	761.4	42.1	5.6	66	ESE			3		6			0.098	2.50		Prof. Reissenberger.
Kremsmünster	28.78	731.1	30.17	766.4	38.7	3.7	85	W			3		7			0.039	1.0		Prof. C. Wagner.
Lemberg			30.04	762.9	36.5	2.5	94	SW			1		9			0.421	10.7		Dr. T. Stanecki.
Nyiregyhaza																			Habzsuda Daniel.
Pola			29.95	760.7	47.5	8.6	55	NE			4		10s			0.335	8.51		I.R.Hydrographic Office.
Szegedin			29.97	761.1	46.4	8.0	78	Calm			0		10			0.051	1.30		Karl Stancel.
Trieste			29.99	761.8	44.6	7.0	66	ENE			3		7			0	0	Cloudy	Prof. V. Farolfi.
Vienna			30.10	764.5	44.2	6.8	59	WNW			3		9			0.016	0.4		I. R. Central Met. Obs'y.

NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 7 p. m., local time. The elevation of Gratz is 343.5 meters, or 1,126.9 feet; Hermannstadt, 407.8 meters, or 1,337.9 feet; Kremsmünster, 383.6 meters, or 1,258.5 feet.

BELGIAN SERIES.

Furnished by the coöperation of J. C. Houzeau, Director of the Royal Observatory at Brussels.

Arlon			30.26	768.3	41.0	5.0	87	SW			2		10			0.114	2.9		Royal Observatory.
Brussels			30.14	765.6	46.6	8.1	82	SW			1		10ks		WNW	0.220	5.60	Covered	
Furnes			30.14	765.5	48.7	9.3	86	WSW			4		6			0.232	5.9		
Maeseyck			30.12	765.0	47.3	8.5	77	SW			4		5			0.047	1 2		

NOTE.—In the originals, the weather is occasionally given in general notes.

BRITISH SERIES

Furnished by the coöperation of Robert H. Scott, Esq., Director of the Meteorological Office, London, Alexander Buchan, Secretary of the Scottish Meteorological Society, Edinburgh, and the respective Observers.

STATIONS.	Barometer. Corrected for instrumental error and temperature. Inches.	Barometer. Corrected for instrumental error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Aberdeen			29.85	758.2	46.3	7.9		W	11	4.9			3			0.070	1.78	Blue sky	William Boswell.
Ardrossan																			William McNeil.
Armagh, Observatory			30.00	762.0	45.0	7.2		WSW	5	2.2									S. Call, for Dr. Robinson.
Bidston (Liverpool Obs.)			29.98	761.5	47.6	8.7		W	15	6.7			10					Overcast	John Hartnup.
Birr Castle, (Parsonstown)			30.04	763.0	47.1	8.4		W			1		9					*D. clouds	J. Dreyer.
Bradford																			J. McLandsborough.
Bridgetown, (Barbados)			30.06	763.5	82.5	28.1		NE			1		6					*D. clouds	Sergt. J. F. Halanen, A.
Cambridge, Observatory			30.05	763.3	50.0	10.0		SW			1–2		10			Blank	Blank	Overcast	H. Todd. [H. C.
Cardington			30.06	763.5	51.0	10.6		W			1		10					Overcast	John McLaren.
Carlisle																			T. Bell, for J. Cartmell.
Chatham, School M. E.			30.18	766.6	49.2	9.6		W			1		8					*D. clouds	Maj. C. N. Martin, R.E.
Dartmoor	28.63	727.2	30.17	766.3	43.5	6.4		W			4		10					Foggy	R. E. Power.
Davos Platz, (Switzerland)	24.88	631.9			25.8	— 3.4	72	NE			1		10			0.00?	0.1(	Snowing	Francis Redford, M. A.
Donaghadee			29.95	760.7	47	8.3		SW			2		5					*D. clouds	J. Mac Gowan.
Dover			30.10	764.5	48	8.9		WSW			3		7					Gloomy	J. Costello.
Eccles, (near Manchester)			29.97	761.2	47.4	8.6		WSW	3.6	1.6			10					Drizzling	Thomas Mackereth.
Falmouth, Observatory			30.15	765.8	51.0	10.6		SW			3		10					Overcast	The Staff.
Fort Napier, (Natal)	27.64	702.0	29.88	758.9	81.3	27.4		NW			4		1					*D. clouds	P'vt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.94	760.5	88	31.1		N			1		2					*D. clouds	
Galway, Queen's College			29.98	761.5	48	8.9		W			1		10					Gloomy	Prof. A. H. Curtis.
Gibraltar, (Mediterranean)			30.10	764.5	63.0	17.2		E			6		7					*D. clouds	Corpl. C. Aitken, A.H.C.
Glasgow, Observatory			29.91	759.7	44.8	7.1		WSW			2		3					Blue sky	Lewis Stuart.
Great Yarmouth			30.02	762.5	49	9.4		WSW			2		4					Hazy	G. T. Watson.
Greenwich, Royal Obs'y			30.10	764.5	48.5	9.2		WSW			1		10			Blank	Blank	Overcast	The Staff, for G. B. Airy.
Guernsey			30.18	766.6	50.0	10.0		SSW			2		8					*D. clouds	Dr. S. E. Hoskins.
Helston			30.12	765.0	51	10.6		SW			4		10n					Raining	M. P. Moyle.
Holyhead			29.98	761.5	47	8.3		WNW			2		10					Overcast	John Tilston.
Kew, Observatory			30.10	764.5	48.5	9.2		WSW	11	4.9			10					Raining	The Staff.
Kingstown			30.02	762.5	48	8.9		WNW			4		10			Blank	Blank	Overcast	George Mitchell.
Leicester Museum			30.00	762.0	50.0	10.0		SW			4		10					Overcast	Wm. J. Harrison, F.G.S.
Malta, (Mediterranean)			29.96	761.0	62.6	17.0		SW			3		6k					*D. clouds	Corp't. P. Bravis, A.H.C.
Nairn			29.80	756.9	44	6.7		W			1		2					¼ clouded	W. D. Penny.
Nassau, (Bahamas)			30.25	768.3	66.2	19.0		NW			4		5					*D. clouds	Surg. Maj. Henry.
Nottingham, Observatory			30.01	762.2	49.7	9.8		SSW			3		10k,d		W	0.01?	0.3(	Overcast	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			30.02	762.5	49.3	9.6		SW			3		10					Overcast	Rev. Stephen Whitty.
Oxford, Radcliffe Obs'y			30.08	763.5	49	9.4		SW			1		10					Gloomy	J. Lucas.
Plymouth			30.14	765.5	49.5	9.7		WNW			2		10					Drizzling	John Merrifield.
Roche's Point			30.05	763.5	47	8.3		NNW			3		5			Blank	Blank	Cloudy	W. Kennedy.
Saint Ann's Head																			John C. Walker.
Saint Helier, (Jersey)			30.21	767.3	50.2	10 1		W			5		10					Overcast	A. P. Amy.
Sandwick Manse, (Orkneys)			29.76	755.9	43.5	6.4		W	20	8.9			3					*D. clouds	Rev. C. Clouston, LL. D.
Scarborough																			F. Shaw.
Scutari Cemetery, (Turkey)			30.16	766.1	46.0	7.8		S			1		1					Blue sky	Sergt. W. H. Lyne.
Sheffield			29.98	761.5	51.7	10.9		WSW			1		10			0.08	2.11	Overcast	W. F. Cooper.
Silloth Rectory			29.94	760.5	48.5	9.2	90	W			2		4			0	0	*D. clouds	Rev. Francis Redford
Stonyhurst, Observatory			29.97	761.2	46.9	8.3		W			1		10					Raining	Rev. S. J. Perry.
Stornoway, Lewis C., (Hebr.)			29.79	756.7	43	6.1		WSW			2		5					*D. clouds	John Smith.
Stratfield Turgiss			30.11	764.8	47.4	8.6		SW			1		10					Raining	Rev. Charles H. Griffith.
Thurso			29.76	755.9	46	7.8		W			4		3					Blue sky	John Trotter.
Truro, Royal Institution			30.14	765.5	52	11.1		SW			5		8					Gloomy	W. Newcombe.
Valencia, Observatory			30.10	764.5	48.6	9.2		W	11	4.9			7					*D. clouds	The Staff.
SUB-SERIES.																			
Calf of Man, (Isle of Man)																			Henry Mercer.
Cape Good Hope, Obs'y			29.97	761.2	85.0	29.4	46	NW	11	4.9		0	2						The Staff, for E. J. Stone.
Hobart Town, (Tasmania)			29.41	747.0	72.0	22.2	78	W			3		3k			0	0		Francis Abbott, F.R.A.S.
Leith, Restalrig Park																0.07	1.8		Andrew Gibb.
Mauritius, Observatory			29.95	760.7	80.2	26.8	71	ENE	10.3	4.6		0	8		ESE	0	0	Cloudy	C. Meldrum.
Melbourne, Observatory			29.83	757.7	66.0	18.9	79	S	5	2.2			3			0	0	Very fine	R. L. J. Ellery.
Monach L't-house, (Hebrides)																			J. Youngclause.
North Unst, (Shetland Is.)																			Robert Burnet.

NOTE.—Generally, the originals do not give the relative humidity, rain-fall, or distinction between upper and lower clouds. The originals give the wind direction to 32 points and weather by the Beaufort notation. The originals give the barometer for Aberdeen, Cardington, Freetown, Galway, Oxford, St. Helier, Sandwick, Scarborough, Stonyhurst, Leith, Monach and North Unst as read off and the amount of cloudiness for Stornoway by the scale 0 to 4. The wind-force is given by the scale 0 to 12 in the official series; 0 to 6 in the sub-series; except in lbs. per square foot for Greenwich and Hobart Town. The rain-fall is measured at Aberdeen at 10 a. m.; Bradford, 9 a. m.; Hobart Town, 7:30 a. m.; Nottingham, 6 p. m.; Mauritius, 9 a. m., local time. The elevation of Dartmoor is 1,400 feet, or 426.7 meters; Davos Platz, 5,165? feet, or 1,556.0? meters; Fort Napier, 2,200 feet, or 670.6 meters. *Detached clouds.

By authority of the Minister of Foreign Affairs.

COSTA RICA SERIES.

Furnished by the coöperation of Senor Federico Maison, Director of the Central Office of Statistics and Meteorology.

STATIONS.	Barometer. Corrected for instrumental error and temperature. Inches.	Barometer. Corrected for instrumental error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
San José																			

DANISH SERIES.

Furnished by the coöperation of Captain N. Hoffmeyer, Director of the Royal Danish Meteorological Institute at Copenhagen.

STATIONS.	Barometer. Corrected for instrumental error and temperature. Inches.	Barometer. Corrected for instrumental error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Copenhagen			29.92	760.0	30.6	— 0.8	88	NNW			4		10						
Fanöe			30.01	762.2	32.7	0.4	82	W			2		9						
Godthaab, (Greenland)			30.02	762.5	9.0	—12.8	76	NNE			4		2						
Stykkisholm, (Iceland)			29.13	739.9	34.2	1.2	96	S			4		10					Snowing	
Thorshavn, (Faröe)			29.56	750.8	39.4	4.1	77	WSW			4		7					Raining	
Vestervig			29.95	760.8	29.6	— 1.4	84	E			2		10						

NOTE.—The originals give the wind-force by the scale 0 to 6; occasionally, weather by Vienna symbols; no distinction between the amount of upper and lower clouds.

FRENCH SERIES.

Furnished by the cooperation of His Excellency, U. J. Le Verrier, Director of the Paris Observatory, and the respective Observers.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Upp'r 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather	Observer.
Alençon	.....	.....	30.26	768.4	50.0	10	86	WSW	.....	.....	2	.....	10kn	.....	WSW	0	0	Covered.....	Normal School.
Amiens	.....	.....	30.22	767.5	48.2	9.0	86	NE	.....	.....	3	.....	2	.....	NE	0	0	Slightly cl'dy	Normal School.
Avignon	.....	.....	30.16	766.0	63.6	12	37	NNW	.....	.....	0	.....	0	.....	.....	0	0	Very clear...	Normal School.
Bar-sur-Seine	.....	.....	30.26	768.5	48.6	9.2	66	SSW	.....	.....	2	.....	8	.....	W	0	0	Very cloudy	C. Saillard.
Beaumette, (near Angers)	.....	.....	30.26	768.6	49.1	9.5	69	SW	2.7	1.2	.....	.....	.....	.....	N	0	0	.....	Beaumette Observ'tory.
Beauvais	.....	.....	30.21	767.4	51.1	10.6	72	SSW	.....	.....	1	.....	10	.....	NW	0.020	0.50	Covered	Normal School.
Besançon	.....	.....	30.30	769.5	45.7	7.6	73	E	.....	.....	3	.....	2	.....	NW	0	0	Slightly cl'dy	Normal School.
Bourg en Bresse	.....	.....	30.35	770.9	48.6	9.2	76	S	.....	.....	2	.....	5k	.....	S	0	0	Cloudy.....	Normal School.
Bourges	.....	.....	30.29	769.4	47.5	8.6	76	SW	.....	.....	2	.....	2	.....	NW	0	0	Slightly cl'dy	Normal School.
Brest	.....	.....	30.17	766.2	52.3	11.3	75	SW	.....	.....	3	.....	10	.....	SW	0.010	0.25	.....	Naval Observatory.
Carcassonne	.....	.....	30.31	769.9	50.4	10.2	60	W	.....	.....	1	.....	5	.....	E	0.04	1.	Cloudy.....	Normal School.
Caen	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Chartres	.....	.....	30.19	766.8	49.1	9.5	84	W	.....	.....	2	.....	9	.....	SSE	0	0	.....	Normal School.
Châlons-sur-Marne	.....	.....	30.24	768.2	48.2	9.0	73	W	.....	.....	3	.....	10k	.....	E	0	0	Covered	Normal School.
Clermont	.....	.....	30.30	769.6	48.6	9.2	48	NW	.....	.....	2	.....	10	.....	N	0	0	.....	Puy de Dome Obs'y.
Commercy	.....	.....	30.28	769.1	45.5	7.5	88	WNW	.....	.....	2	.....	5kn	.....	W	0.020	0.5	Cloudy.....	Normal School.
Commune de Gréasque*	.....	.....	30.11	764.7	53.1	11.7	31	NW	.....	.....	2	.....	0	.....	.....	0	0	.....	M. Kina.
Grenoble	.....	.....	30.24	768.2	46.0	7.8	65	NW	.....	.....	4	.....	2ks	.....	SW	0	0	Slightly cl'dy	Normal School.
La Roche-sur-Yon	.....	.....	30.30	769.5	50.7	10.4	72	W	.....	.....	2	.....	2	.....	E	0	0	Slightly cl'dy	Normal School.
Le Mans	.....	.....	30.26	769.0	49.6	9.8	76	W	.....	.....	3	.....	8	.....	W	0	0	Very cloudy	Normal School.
Lons-Le-Saulnier	.....	.....	30.30	769.6	45.1	7.3	69	N	.....	.....	2	.....	5	.....	.....	0	0	Cloudy.....	Normal School.
Lorient	.....	.....	30.30	769.6	53.6	12.0	68	W	.....	.....	2	.....	5	.....	W	0.035	0.9	Cloudy.....	Naval Observatory.
Mâcon	.....	.....	30.32	770.1	46.8	8.2	79	SW	.....	.....	2	.....	5	.....	NE	0	0	Cloudy.....	Normal School.
Metz	.....	.....	30.30	769.7	43.7	6.5	77	SW	.....	.....	2	.....	10	.....	SW	0.020	0.5	Covered	M. Schuster.
Mirecourt	.....	.....	30.20	767.1	44.6	7	79	NW	.....	.....	2	.....	2	.....	SE	0	0	Slightly cov.	Normal School.
Nismes	.....	.....	30.19	766.8	55.8	13.2	47	N	.....	.....	6	.....	.....	.....	.....	0	0	.....	Normal School.
Orleans	.....	.....	30.20	767.0	47.8	8.8	89	SW	.....	.....	2	.....	5	.....	SW	0	0	Cloudy.....	Normal School.
Paris, Observatory	.....	.....	30.24	768.0	49.6	9.8	69	WSW	.....	.....	2	.....	10k	.....	W	0	0	Covered	National Observatory.
Parthenay	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Privas	.....	.....	30.28	769.2	48.2	9	42	N	.....	.....	4	.....	2	.....	N	0	0	Slightly cl'dy	Normal School.
Rochefort, Observatory	.....	.....	30.34	770.5	56.5	13.6	62	S	.....	.....	1	.....	10	.....	N	0	0	Covered	Naval Observatory.
Rouen	.....	.....	30.19	766.9	50.7	10.4	77	W	.....	.....	2	.....	10	.....	W	0	0	Covered	Normal School.
Saint Lo	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Tarbes	29.18	741.2	30.28	769.1	50.0	10	84	ENE	.....	.....	2	.....	2	.....	E	0.150	3.8	Slightly cl'dy	Normal School.
Villefranche	.....	.....	30.31	769.8	50.5	10.3	84	NNE	.....	.....	2	.....	2	.....	N	0	0	Slightly cl'dy	Normal School.
Sub-Series.																			
Fort de France, Martinique	.....	.....	29.96	761.0	78.8	26	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	L'Abbé Marchésl.
Marseilles	.....	.....	30.06	763.4	56.7	13.7	32	WNW	.....	.....	3	.....	.....	.....	.....	0	0	Clear	Marseilles Observatory.
Mont-Louis	24.98	634.6	30.30	769.6	42.1	5.6	100	E	14.9	6.66	.....	1	.....	N	0.008	0.2	.....	—. Falguère.
Montsouris, Paris	.....	.....	30.23	767.7	48.7	9.3	76	WSW	.....	.....	2	10	.....	W	0	0	.....	Montsouris Observatory
Perpignan	.....	.....	30.21	767.3	54.1	12.3	35	NE	28.0	12.50	.....	0	.....	.....	.....	0	0	.....	Dr. Fines.
Pic du Midi, (Summit,) H. P.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. Baylac.
Pic du Midi, (Plantade,) H. P.	22.58	573.4	.....	.....	30.2	— 1.0	.....	N	.....	.....	3	.....	1	.....	.....	0	0	Clear.....	General de Nansouty.
Saint Maur, (near Paris)	.....	.....	30.23	767.9	48.7	9.3	79	SW	.....	.....	1	.....	10	.....	.....	0	0	Covered	E. Renou.
Toulouse	.....	.....	30.37	771.4	47.8	8.8	75	NNW	.....	.....	2	.....	6	.....	.....	0	0	.....	Toulouse Observatory.
Tours	.....	.....	30.28	769.0	49.8	9.9	70	W	.....	.....	1	.....	10	.....	W	0	0	.....	C. Marquet.
Versailles, (near Paris)	.....	.....	30.24	768.0	48.9	9.4	81	NW	.....	.....	1	.....	10	.....	.....	0	0	Covered	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai)	.....	.....	30.07	778.9	25.5	— 3.6	39	NW	22.4	10.0	.....	0	.....	.....	.....	0	0	.....	Marc Dechevrens, S. J.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—Generally, the originals give the wind-force by the scale 0 to 7; no distinction between upper and lower clouds, and, in the official series, the amount by the scale 0 to 4 the rain-fall as measured at 7, 8 or 9 a. m., local time; at Clermont, 9 a. m. of the following day; the weather in general terms as published. The elevation of Clermont is 388 meters, or 1,272.9 feet; Commune de Gréasque, 322 meters, or 1,056.4 feet; Tarbes, 308 meters, or 1,010 feet; Mont-Louis, 1,589.40 meters, or 5,214.8 feet; Pic du Midi, (Summit,) 2,877 meters, or 9,439.1 feet; Pic du Midi, Plantade,) 2,866 meters, or 7,762.6 feet. In correcting the Mont-Louis barometric observations for altitude, the constant 135. millimeters has been added. *Bouches-du-Rhône

GERMAN SERIES.

Furnished by the coöperation of Professor Dr. G. Neumayer, Director of the German Naval Observatory, Hamburg.

Bamberg	.....	.....	30.14	765.5	41.9	5.5	62	W	.....	.....	3	.....	7	W	.....	0	0	.....	Prof. T. Hoh.
Berlin	.....	.....	30.08	764.0	40.6	4.8	72	W	.....	.....	1	.....	10	.....	.....	0	0	.....	Prof. Arndt.
Breslau	.....	.....	30.10	764.4	39.9	4.4	64	WNW	.....	.....	4	.....	9	.....	.....	0	0	.....	Royal University Obs'y
Carlsruhe	.....	.....	30.21	767.3	44.2	6.8	80	SW	.....	.....	3	.....	10	.....	.....	0.102	2.6	.....	A. Sena.
Cassel	.....	.....	30.13	765.3	44.1	6.7	66	WNW	.....	.....	5	.....	8	W	.....	0.106	2.7	.....	Dr. H. Möhl.
Crefeld	.....	.....	30.11	764.8	48.0	8.9	75	W	.....	.....	3	.....	8	.....	.....	0	0	.....	Director Lose.
Emden	.....	.....	30.15	765.9	43.0	6.1	93	NW	.....	.....	2	.....	8	.....	.....	0.315	8.0	.....	Prof. Prestel.
Frankfort on the Main	.....	.....	30.24	768.1	48.7	9.3	55	W	.....	.....	2	.....	6	.....	.....	0.024	0.6	.....	Physical Society.
Friedrichshafen	28.80	731.6	30.30	769.5	39.9	4.4	90	SSW	.....	.....	2	.....	10	.....	.....	0	0	.....	M. Wilhelm.
Hamburg	.....	.....	30.07	763.7	36.7	2.6	79	WNW	.....	.....	4	.....	10ks	.....	.....	0.165	4.2	.....	Captain F. Hegemann.
Kiel	.....	.....	30.03	762.8	33.4	0.8	83	W	.....	.....	2	.....	2	.....	.....	0.024	0.6	.....	Prof. G. Karsten
Königsberg, (Prussia)	.....	.....	29.97	761.3	36.7	2.6	89	SW	.....	.....	2	.....	9	.....	.....	0.063	1.6	.....	Prof. E. Luther.
Köslin	.....	.....	29.98	761.5	34.0	1.1	.....	W	.....	.....	1	.....	10	.....	.....	0	0	.....	H. Müller.
Leipsic	.....	.....	30.11	764.9	41.9	5.5	71	W	.....	.....	3	.....	9	W	.....	0.028	0.7	.....	Prof. Bruhns.
Memel	.....	.....	29.98	761.5	35.6	2.0	91	SE	.....	.....	1	.....	9cs	.....	.....	0.004	0.1	.....	Reinbrecht & Skalweit.
Münster	.....	.....	30.07	763.8	46.4	8.0	75	SW	.....	.....	3	.....	3	.....	.....	0.043	1.1	.....	Prof. E. Heis.
Neufahrwasser	.....	.....	29.95	760.8	38.5	3.6	90	SSW	.....	.....	2	.....	10	.....	.....	0.004	0.1	.....	A Lothe.
Posen	.....	.....	30.03	762.7	39.2	4.0	96	SW	.....	.....	6	.....	10	.....	.....	0.008	0.2	.....	Dr. Magener.
Strassburg, (in Alsace)	.....	.....	30.26	768.5	46.9	8.3	67	SW	.....	.....	1	.....	10	NW	.....	0.059	1.5	.....	Dr. Schur.
Stuttgart	.....	.....	30.22	767.5	43.2	6.2	65	W	.....	.....	1	.....	8	.....	.....	0	0	.....	Prof. Schoder.
Thorn	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Dr. Hasenbalg.
Treves, (Trier)	.....	.....	30.10	764.5	46.9	8.3	69	W	.....	.....	5	.....	10	.....	.....	0	0	.....	Prof. Flesch.
Weissenburg, (Bavaria)	28.63	727.2	30.19	766.8	39.6	4.2	70	WNW	.....	.....	3	.....	10	W	.....	0.008	0.2	.....	Dr. von Bebber.
Wustrow, Naval School	.....	.....	30.07	763.6	32.2	0.1	96	WNW	.....	.....	3	.....	10	.....	.....	0.075	1.9	.....	E. F. Schütz.
German Naval Series.																			
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—The elevation of Friedrichshafen is 417.4 meters, or 1,366.5 feet; Weissenburg, 431 meters, or 1,414.6 ft. In the originals the distinction between the amount of upper and lower clouds is not made. It is not always certain that the remarks in the weather column refer to the moment of observation.

GREEK SERIES.

Furnished by the coöperation of Professor Dr. J. F. Julius Schmidt, Director of the Royal Observatory at Athens.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Athens	.....	.....	30.13	765.3	55 4	13 0	.....	W	.....	.....	.....	... ...	.....	.....	.....	.....	.....	Very clear.	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

Note.—The originals give the barometer corrected, but not reduced to sea-level; occasionally the kind of clouds; the weather as published. They omit the humidity wind-force, amount of cloudiness and rain-fall.

INDIAN SERIES.

Furnished by the coöperation of H. F. Blanford, Meteorological Reporter to the Government of India.

Kurrachee	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Deesa	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Bombay	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Poona	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Lahore	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Belgaum	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Bangalore	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Rorkee	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Agra	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Trichinopoly	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Nagpur	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Madras	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Lucknow	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Allahabad	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Patna	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Hazaribagh	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cuttack	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Calcutta (Alipore)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Goalpara	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Chittagong	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Sibsagar	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Rangoon	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Jubbulpore	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
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ITALIAN SERIES.

Furnished by the cooperation of His Excellency the Minister of Agriculture, Industry and Commerce, and the respective Observers.

Udine	.....	.....	29.98	761.5	49.1	9.5	66	W	5.6	2.5	.....	.....	7	.....	.....	0.988	25.1	Raining	Prof. Giovanni Clodig.
Stelvio	22.04	559.8	.....	.....	16.7	— 8.5	... ...	E	.....	.....	4	.....	8	SW	.....	1.114	28.3	Snowing	Signora Ernesta Manfredi.
Valdobbia	22.09	561.0	.....	.....	22.5	— 5.3	84	W	.....	.....	4	.....	0	.....	.....	0	0	.....	Ab. Dom. Mongini.
Padua	.....	.....	30.03	762.8	47.3	8.5	71	SW	3 6	1.7	.....	.....	7	SW	.....	0.536	13.6	.....	Prof. Dott. Lorenzoni.
Vicenza	.....	.....	30.03	762.7	47.7	8.7	74	SW	4.9	2.2	.....	.....	6	.....	.....	0.902	22.9	.....	Conte Alm. Da Schio.
Verona	.....	.....	30.01	762.3	50.9	10.5	76	W	.....	.....	1	.....	10	.....	.....	0	0	.....	Dott. B. Bertoncelli.
Bergamo	28.68	728.5	30.03	762.7	48.2	9.0	53	SE	.....	.....	2	.....	0	.....	.....	0	0	.....	Prof Trionfini Carlo.
Domodossola	.....	.....	30.05	763.3	53.6	12.0	21	N	.....	.....	0	.....	0	.....	.....	0	0	.....	P of. Giuseppe Calza.
Milan	.....	.....	30.05	763.3	52.3	11.3	71	SSE	.....	.....	2	.....	1	SE	.....	0	0	.....	Ab. Gio. Capelli.
Pavia	.....	.....	30.04	763.0	50.4	10.2	44	SE	.....	.....	2	.....	07	.....	.....	0.303	7.7	Raining?	Pr . Gio. Cantoni.
Moncalieri	.....	.....	30.07	763.6	51.4	10.8	35	SE	1.3	0.6	.....	.....	0	.....	.....	0	0	.....	Pro P. F. Denza.
Mondovi	28.13	714.5	30.08	763.9	48.6	9.2	15	NNW	.....	.....	2	.....	0	.....	.....	0	0	.....	Prof. I . C. Bruno.
Porto Maurizio	.....	.....	30.08	763.9	58.6	14.8	10	NNW	.....	.....	4	.....	07	.....	.....	0.08?	2.1	Raining?	Prof. . Vassallo.
Genoa	.....	.....	30.02	762.6	57.2	14.0	20	N	6.3	2.8	.....	.....	07	.....	.....	0.020	0.5	Light rain?	Prof. G M Garibaldi.
Piacenza	.....	.....	30.06	763.5	49.8	9.9	62	E	4.3	1.9	.....	.....	07	.....	.....	0.543	13.8	Raining?	Dott. G. anzi.
Parma	.....	.....	30.01	763.2	48.4	9.1	62	SE	.....	.....	4	.....	1	.....	.....	0.311	7.9	Raining	Prof. P. Pigorini.
Florence	.....	.....	30.02	762.6	48.7	9.3	69	N	.....	.....	2	.....	0	N	.....	0.49?	12.5	Raining	Cav. F. Meucci.
Leghorn	.....	.....	29.98	761.6	53.6	12.0	33	NNE	4.9	2.2	.....	.....	0	ENE	.....	0	0	.....	Prof. P. Monte.
Siena	28.71	729.2	29.93	760.3	45.9	7.7	59	NNW	6.9	3.1	.....	.....	0	N	.....	0.18?	4.7	Raining	Prof. L Toscani.
Urbino	28.39	721.2	29.98	761.6	38.7	3.7	90	NE	.....	.....	2	.....	10	.....	.....	0.215	5.4	Raining	Prof. P. Serpieri.
Pesaro	.....	.....	29.97	761.3	46.2	7.9	71	NE	58.4	26.1	.....	.....	10	NE	.....	0.299	7.6	Thunder-storm.	Prof. Luigi Guidi.
Ancona	.....	.....	30.00	761.9	48.6	9.2	54	N	.....	.....	6	.....	10	N	.....	0.23?	6.0	.....	Prof. F. De— Bosis.
Grosseto	.....	.....	29.96	760.9	51.6	10.9	57	NNE	.....	.....	2	.....	0	S	.....	0	0	.....	Avv. P. Pontecelli.
Rome	.....	.....	29.89	759.1	53.4	11.9	64	NW	4.9	2.2	.....	.....	4	WNW	.....	0.27	6.9	.....	Prof's. P. Secchi & L. Respighi
Naples, O. U	.....	...	29.87	758.6	54.7	12.6	67	SE	.....	.....	4	.....	9	SW	.....	0.354	9.0	Raining	Prof. L. Palmieri.
Lecce	.....	.....	29.93	760.2	57.6	14.2	78	SSW	31.1	13.9	.....	.....	10	SSW	.....	0.039	1.0	Light rain	Prof. C. De—Giorgi.
Cosenza	.....	.....	29.97	761.2	58.8	14.9	79	WNW	5.6	2.5	.....	.....	8	.....	.....	0.03?	0.8	Light rain	Prof. F. D. Conti.
Cagliari	.....	.....	29.96	761.0	55.8	13.2	40	NW	.....	.....	6	.....	3	NW	.....	0	0	.....	Prof. A. Pacinotti.
Ittiposto, (Sicily)	.....	.....	29.89	759.2	60.4	15.8	68	N	.....	.....	2	.....	2	S	.....	0	0	.....	Prof. F. Cafiero.
Palermo	.....	.....	29.92	759.9	55.6	13.1	52	NW	16.1	7.2	.....	.....	7	NW	.....	0	0	.....	Prof. G. Caccatore.
Caltanissetta	27.97	710.5	29.96	760.9	54.9	12.7	53	W	.....	.....	4	.....	4	SE	.....	0	0	.....	Prof. A. Pagani.
Siracusa	.....	.....	29.95	760.8	61.9	16.6	79	E	.....	.....	1	.....	7	W	.....	0	0	.....	Prof. V. Giuliano.
Sub-Series.																			
Naples, S. R.	.....	.....	29.93	760.1	49.6	9.8	75	W	1.1	2.5	.....	.....	9	NW	.....	0 49(	12.6	... .	Prof. F. Brioschi.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

Note.—The originals give the wind-force by the scale 0 to 4, or the velocity in kilometers per hour; generally, no distinction between upper and lower clouds, occasionally the weather by the Vienna symbols. The elevation of Stelvio is 2,543.0 meters, or 8,342.9 feet; Valdobbia, 2,548.0 meters or 8,359.3 feet; Bergamo, 379.6 meters, or 1,24 3 feet; Monodovi, 556 meters, or 1,824.2 feet; Siena, 348.5 meters, or 1,143.3 feet; Urbino, 451 meters, or 1,479.7 feet; Caltanissetta, 570.3 meters, or 1,871.0 feet.

JAPANESE SERIES.

Furnished by the coöperation of the Imperial University of Tokei, Japan.

Tokei	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Prof. P. V. Veeder.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

Note.—The originals give the amount of cloudiness by the scale 0 to 4 without distinguishing between upper and lower clouds. The rain-fall is measured at 7 a. m. local time.

By authority of the SECRETARY OF PUBLIC WORKS.

MEXICAN SERIES.

Furnished by the coöperation of Senor Mariano Barcena, Director of the Central Meteorological Observatory in the City of Mexico.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Up er. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Mexico																			Mariano Barcena.
																			Vicente Reyes.
																			Miguel Perez.

(Engineers in charge.)

NOTE.—The elevation of Mexico is 2,290 meters, or 7,512.9 feet. The rain-fall is measured at 6 a. m., local time.

NETHERLANDS' SERIES.

Furnished by the cooperation of Professor Buys Ballot, Director of the Royal Meteorological Institute of the Netherlands at Utrecht.

Flushing			30.14	765.6	46.8	8.2		WSW			8					0.012	0.3		
Groningen			29.98	761.5	44.8	7.1										0.067	1.7		
Helder			30.02	762.6	47.1	8.4		SSW			2					0.185	4.7		
Utrecht			30.04	763.1	49.3	9.6	90	WSW			4		8			0.016	0.4	Very cloudy	

NOTE.—The originals give the wind-pressure in kilograms per square meter; for Utrecht, they give the weather as published, from which the amount of cloudiness is taken by the scale 0 to 4, without distinguishing between upper and lower clouds. It is assumed that the barometer readings have been reduced to sea-level.

NORWEGIAN SERIES.

Furnished by the coöperation of Professor H. Mohn, Director of the Royal Norwegian Meteorological Institute at Christiania.

Bergen			29.83	757.7	33.1	0.6	89	S	23.0	10.7		10				0.433	11.0		
Brönö			29.79	756.6	28.4	— 2.0	60	S	33.6	15		1				0	0		
Christiania			30.07	763 8	19.4	— 7.0	78	NNE	9.9	4.1		10				0 098	2.5	Snowing	
Tromsö			29.71	754.7	23.7	— 4.6	60	SW	13.4	6		0				0	0		

NOTE.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols. The cloudiness and weather at Bergen refer to 2h., p. m., local time, instead of 1h., 4 min.

PORTUGUESE SERIES.

Furnished by the cooperation of J. C. de Brito Capello, Director of the Meteorological Observatory of the Infante Don Luiz at Lisbon.

Angra, (Azores)			30.19	766.9	56 8	13.8	82	N	16.1	7.2		6				0.661	16.8		Dr. J. A. Sampaio.
Campo Major			30.16	766.1	59.0	15.0	34	NE	9.8	4.4		2				0	0		Dr. A. M. R. dos Santos.
Funchal, (Madeira)			30.26	768.5	65.9	17.7	63	SW	7.4	3.3		0				0	0		Capt. D. A. de Cunha.
Lisbon			30.19	766.8	57.2	14.0	46	NNE	15.0	6.7		1				0	0		The Observatory.
Ponta Delgada, (Azores)			30.25	768.4	60 4	15.8	85	S	6.3	2.8		10				0	0		

NOTE.—The originals give the wind-velocity in kilometers per hour; occasionally, the weather by the Vienna symbols; the amount of cloudiness without distinguishing between upper and lower clouds; the barometer corrected but not reduced to sea-level. The rain-fall at Lisbon is measured at noon, instead of 0 h. 6 m., p. m.

RUSSIAN SERIES.

Furnished by the cooperation of Professor H. Wild, Director of the Imperial Central Physical Observatory of Russia, at St. Petersburg.

Warsaw			30.04	763.1	38.1	3.4	88	S	4	2		10							Astronomical Obs.
Wilna			30.03	762.8	36.0	2.2	84	S	2	1		10							Astronomical Obs.
Dorpat			30.16	766.0	16.3	— 8.7	92	ESE	13	6		10						Snowing	Physical Cabinet.
St. Petersburg			30.36	771.1	11.1	—11.6	88	ESE	13	6		1							Central Physical Obs.
Kuopio			30.42	772.6	— 5.1	—20.6	86	NE	7	3		0							Ch. Forsten.
Kieff			30.17	766.2	30.4	— 0.9	86	SSE	11	5		10							Physical Cabinet.
Nikolaiev			30.29	769.3	33.6	0.9	68	SE	9	4		1							Kurdakof.
Kertch			30.26	768.6	27.0	— 2.8	98	NE	7	3		10							Lagorio.
Moscow			30.50	774.6	11.5	—11.4	82	SSE	9	4		10							Meteorological Obs.
Lugan			30.37	771.4	9.9	—12.3	66	E	2	1		1							Meteorological Obs.
Archangel			30.32	770.0	2.6	—16.4	82	W	18	8		3							Ogorodnikof.
Tiflis	28.72	729.4	30.19	766.7	40.3	4.6	67	NW	9	4		4							Physical Observatory.
Astrakhan			30.39	771.8	15.4	— 9.2	78	NNE	9	4		10				Blank	Blank		Sebastianof.
Kasan			30.54	775 7	— 0.4	—18.0	68	WSW	2	1		0							Physical Cabinet.
Orenburg			30.23	767.9	30.4	— 0.9	88	E	13	6		5							Tschernischei.
Ekaterinburg	29.08	738.7	30.13	765.4	1.4	—17.0	68	WSW	22	10		8							Meteorological Obs.
Nukuss			29.99	761.8	35.1	1.7	91	W	9	4		10							
Kasaly																			Bobrof.
Tashkend	28.50	724.0	30.22	767.6	54.3	12.4	30	Calm	0	0		3							Michelson.
Barnaul			29.90	759.5	24.4	— 4.2	91	SW	16	7		10						Snowing	Meteorological Obs.
Yeniseisk			29.27	743.4	27.5	2.5	87	S	11	5		10						Snowing	Marks.
Irkutsk																			Usolzef.
Peking, (China)			30.36	771.1	23.0	— 5.0	50	Calm	0	0		0							Physical Observatory.
Nertchinsk																			Meteorological Obs.,
Vladivostock																			
Nikolaievsk, on the Amoor																			

NOTE.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols; they omit the rain-fall. The elevation of Tiflis is 469 meters, or 1,541.8 feet; Ekaterinburg, 306. 4? m., or 1,005.2? ft.; Tashkend, 494.2? m., or 1,621.3? ft.; Irkutsk, 392 m., or 1,286 ft.; Nertchinsk, 592.0? m., or 1,942.2? ft.

SPANISH SERIES.

Furnished by the cooperation of Antonio Aguilar, Director of the Royal Observatory at Madrid, and of Don Cecilio Pujazon, Captain R. N. Director of the Naval Observatory at San Fernando.

Madrid			29.75	755.7	59.9	15.5	37	NE	6.7	3.00		0	0			0	0	Clear	Royal Observatory.
San Fernando			30.15	765.7	62.6	17.0	68	S	10.3	4.6		0	10		NE	0	0		Naval Observatory.

NOTE.—The originals give the weather in general terms, as published; rain-fall for San Fernando from preceding to following midnight; wind-velocity for Madrid in kilometers per hour.

SWEDISH SERIES.

Furnished by the coöperation of Professor R. Rubenson, Director of the Royal Swedish Meteorological Institute, at Stockholm, and of Dr. H. H. Hildebrandsson, Chief of the Meteorological Division of the Upsala Observatory.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Haparanda			30.47	773.9	—14.8	—26.0	60	NE			2		0			0	0		
Umea																			
Hernosand			30.22	767.6	1.0	—17.2	100	NE			4		10			0.047	1.2	Snowing	
Stockholm			30.02	762.4	15.4	— 9.2	94	NNE			4		10			0.016	0.4		
Wisby			29.94	760.4	32.4	0.2	92	SE			6		10			0.008	0.2	Snowing	
Sub-Series.																			
Upsala			30.07	763.7	15.3	— 9.3	89	NE	8.3	3.7			10			0	0		Dr. Hildebrandsson.

Note.—The originals give the wind-force by the scale 0 to 6, and Upsala also velocity in meters per second; occasionally, the weather by the Vienna symbols, or in general terms; no distinction between the amount of upper and lower clouds. The rain-fall is measured at 8 a. m., local time.

SWISS SERIES.

Furnished by the coöperation of Professor R. Wolf, Director of the Observatory at Zurich, and of Professor E. Plantamour, Director of the Observatory at Geneva.

Geneva	28.80	731.4	30.26	768.5	42.4	5 8	73	N			3		0			0.020	0.5	Clear	The Observatory.
Zurich	28.60	726.4	30.28	769.2	40.6	4.8	79	W			1		4			0	0	Fair	The Observatory.

Note.—For Geneva the corresponding departures from the normal values are: Barometer, +2.3 mm; Thermometer, +1.8 cent.; Relative Humidity, +3 per cent.

Note.—The rain-fall is measured at Zurich at 7 a. m. on the following day. The origin ils give the barometer corrected but not reduced to sea-level; the wind-force by the scale 0 to 4 for Zurich; the amount of cloudiness without distinguishing between upper and lower clouds, the weather in general terms. The elevation of Geneva is 408 meters, or 1,339 feet, and that of Zurich 470 meters, or 1,542 feet.

TURKISH SERIES.

Furnished by the cooperation of A. Coumbary, Effendi, Director of the Central Observatory at Constantinople, and of Professor C. V. A. Van Dyck, Superintendent of the Lee Observatory at Beirut.

Constantinople																			
Fão, (Persian Gulf)																			
Salonica																			
Valona																			
Varna																			
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y			30.19	766.9	56.8	13.8	85	SSW			2		9m		SW	0.35	8.9	Raining	Prof. C. V. A. Van Dyck.

Note.—The originals give the wind-force by the scale 0 to 7, (except Beirut, by the scale 0 to 12, and Constantinople velocity in meters per second;) the weather in general terms as published; no distinction between upper and lower clouds, and, except Constantinople and Beirut, the amount by the scale 0 to 4. It is assumed that the barometer is reduced to sea-level.

CANADIAN SERIES.

Furnished by the cooperation of Professor G. T. Kingston, Director of the Magnetic Observatory at Toronto, and Superintendent of the Meteorological Office of the Dominion of Canada, and the respective Observers. Those marked with a star (*) are also telegraphed daily to the office of the Chief Signal Officer, U. S. Army.

Bathurst, N. B																			Hon. J. Ferguson.
Brockville, Ontario			30.01	762.2	13	—10.6		Calm	0	0		0	0			0	0	Clear	W. R. Bigg.
*Chatham, N. B			29.21	741.9	20	— 6.7	100	N	4	1.8			10s		N	0.58	14.7	Light snow	G. A. Blair.
Charlottetown, P. E. Island			29.21	741.9	30	— 1.1	98	SW	8	3.6			10n			0.06	1.5	Cloudy	H. J. Cundall, C. E.
Cornwall, Ontario			29.90	759.4	9.9	—12.3	89	W			3		10s			0	0	Dull	James Smith, M. A.
Dalhousie, N. B								NW			1					0.90	22.9	Snowing	H. A. Johnson.
Esquimault, B. C			29.82	757.4	49.3	9.6	71	SE				3cs	0			0	0	Clear	W. H. Bovis.
*Father Point, Quebec			29.42	747.3	16	— 8.9	81	N	20	8.9			10n			0.59	15.0	Cloudy	J. McWilliams.
Fredericton, N. B			29.25	742.9	20.0	— 6.7	92	W	6	2.7			10n			0.925	23.50	Light snow	Prof. Harrison.
*Fort Garry, Manitoba			29.87	758.7	24	— 4.4	95	NW	14	6.3		0	0			0	0	Clear	James Stewart.
Goderich, Ontario			30.12	765.0	21.3	— 5.9	90	Calm			0		10n			0.10	2.5	Threatening	H. J. Strang, M. A.
Granton, Ontario	28.95	735.3	30.14	765.5	19.3	— 7.1		W			1		10n			0	0	Cloudy	James Grant.
*Halifax, N. S			29.27	743.4	27	— 2.8	88	SW	6	2.7		0	5ks		W	0.426	10.82	Fair	F. Allison, M. A.
Hamilton, Ontario			30.14	765.5	25.2	— 3.8	72	SW			1		10n			0.15	3.8	Cloudy	G. Dickson.
Heart's Content, N. F			29.53	750.0	40	4.4	100	SE			5		10			1.50	38.1	Raining	E. Weedon.
*Kingston, Ontario			30.06	763.5	10	—12.2	79	Calm	0	0		0	0			0	0	Clear	S. Woods, M. A
*Montreal, Quebec			29.77	756.1	12	—11.1	78	W	26	11.6		0	2cs			Inap.	Inap.	Clear	C. H. McLeod, C. E.
*Ottawa, Ontario			29.94	760.5	7	—13.9	74	W	10	4.5		8k	0	SW		0	0	Fair	J. B. Haney.
*Parry Sound, Ontario			30.14	765.5	— 3	—16.1	87	W	2	0.9		5k	2ks	W	W	0	0	Fair	Rev. R. Mosley.
Port Dover, Ontario			30.15	765.8	20	— 6.7	85	SW	5	2.2		Haze	Haze			Inap.	Inap.	Cloudy	H. Morgan.
Port Hastings, N. S																			Peter Grant
Port Stanley, Ontario			30.19	766.8	19	— 7.2	87	W	6	2.7			10n		W	0.01	0.3	Cloudy	M. Payne.
*Quebec, Quebec			29.50	749.3	0	— 6.7	85	SW	16	7.2			10n		SW	0.15	3.8	Cloudy	Capt. Ashe, R. N.
*Rockliffe, Ontario			30.09	764.3	0	—17.8	94	W	6	2.7		0	0			0	0	Clear	
St. John, N. B			29.27	743.4	21	— 6.1	85	SW	7	3.1		1k	0			0	0	Clear	G. Murdoch, C. E.
*Saugeen, Ontario			30.07	763.8	19	— 7.2	84	Calm	0	0			10s			0.05	1.3	Light snow	K. Stewart.
Stayner, Ontario																			R. J. Cole.
Stratford, Ontario	28.75	730.2	30.12	765.0	19.8	— 6.8	95	SW	5	2.2			10s			0.10	2.5	Cloudy	C. J. MacGregor, M. A.
*Sydney, C. B			29.25	742.9	33	0.6	95	SW	2	0.9			10n			0.69	17.5	Light snow	T. C. Hill.
*Toronto, Ontario			30.12	765.0	13	—10.6	83	W	2	0.9			10s		W	Inap.	Inap.	Cloudy	Magnetic Observatory.
Woodstock, Ontario			30.15	765.8	19.8	— 6.8	99	W	6	2.7			10s			0.55	14.0	Cloudy	J. Montgomery.
Sub-Series.																			
St. Johns, Newfoundland			29.68	753.9	38.0	3.3	100	SE					10			0.28	7.1	Stormy	John Delany.

Note.—The originals for Brockville, Charlottetown, Port Dover, Port Stanley, Stayner, St. Johns, N. F. and those telegraphed, give the amount of cloudiness by the scale 0 to 4. The elevation of Granton is 1,015 feet, or 309.4 m.; Stratford, 1,182 feet, or 360.3 m

UNITED STATES SERIES.

Furnished by the coöperation of Bvt. Brig. Gen. Albert J. Myer, Chief Signal Officer, U. S. Army.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Force. 0—10.	Clouds. Amount. Up'er. 0—10.	Clouds. Amount. Low'r. 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Albany, N. Y.	.....	.....	29.87	758.7	18	— 7.8	84	W	28	12.5	.....	0	1s	.....	.....	0	0	Clear	
Alpena, Mich.	.....	.....	29.99	761.7	22	— 5.6	72	SE	12	5.4	.....	.....	10s	.....	SE	0.02	0.5	Cloudy	
Atlantic City, N. J.	.....	.....	30.01	762.2	25	— 3.9	75	W	16	7.2	.....	0	0	.....	.....	0	0	Clear	
Augusta, Ga.	.....	.....	30.31	769.9	35	1.7	80	NW	2	0.9	.....	2c	0	NW	.....	0	0	Clear	
Baltimore, Md.	.....	.....	30.10	764.5	28	— 2.2	67	W	3	1.3	.....	0	0	.....	.....	0	0	Clear	
Barnegat, N. J.	.....	.....	29.98	761.5	26	— 3.3	64	NW	20	8.9	.....	0	0	.....	.....	0	0	Clear	
Bismarck, Dakota	28.29	718.6	29.99	761.7	34	1.1	70	NW	8	3.6	.....	0	0	.....	.....	0	0	Clear	
Boston, Mass.	.....	.....	29.63	752.6	17.5	— 8.1	67	W	24	10.7	.....	10cs	Haze	W	.....	0	0	Cloudy	
Breckenridge, Minn.	.....	.....	29.73	755.1	28	— 2.2	77	W	16	7.2	.....	0	0	.....	.....	0	0	Clear	
Buffalo, N. Y.	.....	.....	30.10	764.5	21.5	— 5.8	78	W	8	3.6	.....	.....	10s	.....	.....	0.01	0.3	Cloudy	
Burlington, Vt.	.....	.....	29.80	756.9	18	— 7.8	66	NW	10	4.5	.....	0	8s	.....	.....	0.02	0.5	Cloudy	
Cairo, Ill.	.....	.....	30.32	770.1	33	0.6	79	Calm	0	0	.....	0	Fog	.....	.....	0	0	Clear	
Cape Hatteras, N. C.	.....	.....	30.14	765.5	38	3.3	46	NW	15	6.7	.....	0	0	.....	.....	0	0	Clear	
Cape Henry, Va.	.....	.....	30.16	766.1	35	1.7	54	NW	20	8.9	.....	0	0	.....	.....	0	0	Clear	
Cape Lookout, N. C.	.....	.....	30.24	768.1	35	1.7	61	NW	15	6.7	.....	0	0	.....	.....	0	0	Clear	
Cape May, N. J.	.....	.....	30.05	763.3	27	— 2.8	66	NW	40	17.9	.....	0	0	.....	.....	0	0	Clear	
Charleston, S. C.	.....	.....	30.28	769.1	39	3.9	63	N	7	3.1	.....	0	Sm'e	.....	.....	0	0	Clear	
Cheyenne, Wyoming	24.14	613.1	30.08	764.0	30	— 1.1	67	NW	16	7.2	.....	0	0	.....	.....	0	0	Clear	
Chicago, Ill.	.....	.....	30.05	763.3	30	— 1.1	78	S	3	1.3	.....	0	0	.....	.....	0	0	Clear	
Cincinnati, Ohio	.....	.....	30.24	768.1	26	— 3.3	76	SE	2	0.9	.....	1ck	0	NW	.....	0	0	Clear	
Cleveland, Ohio	.....	.....	30.21	767.3	22	— 5.6	85	SW	7	3.1	.....	.....	10s	.....	W	Inap.	Inap.	Cloudy	
Corsicana, Tex.	.....	.....	30.36	771.1	41	5.0	91	Calm	0	0	.....	2cs	5s	.....	.....	0	0	Fair	
Davenport, Iowa	.....	.....	30.05	763.3	34	1.1	69	SW	9	4.0	.....	0	0	.....	.....	0	0	Clear	
Denison, Tex.	.....	.....	30.36	771.1	40	4.4	81	S	5	2.2	.....	0	0	.....	.....	0	0	Clear	
Denver, Col.	24.93	633.2	30.15	765.8	26	— 2.2	67	S	5	2.2	.....	0	0	.....	.....	0	0	Clear	
Detroit, Mich.	.....	.....	30.13	765.3	23	— 5.0	73	SW	4	1.8	.....	5cs	0	.....	.....	0	0	Fair	
Dodge City, Kan.	27.52	699.0	29.91	759.7	32	0.0	89	N	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Dubuque, Iowa	.....	.....	29.97	761.2	32	0.0	79	SW	6	2.7	.....	0	0	.....	.....	0	0	Clear	
Duluth, Minn.	.....	.....	29.70	754.4	30	— 1.1	79	Calm	0	0	.....	5c	0	.....	.....	0	0	Fair	
Eastport, Me.	.....	.....	29.28	743.7	19	— 7.2	100	SW	13	5.8	.....	.....	10n	.....	.....	0.38	9.7	Light snow	
Erie, Pa.	.....	.....	30.14	765.5	22	— 5.6	85	SW	12	5.4	.....	Haze	5s	.....	.....	0	0	Fair	
Escanaba, Mich.	.....	.....	29.83	757.7	27	— 2.8	88	S	9	4.0	.....	.....	10s	.....	.....	Inap.	Inap.	Cloudy	
Fort Gibson, Indian Ter.	.....	.....	30.28	769.1	37	2.8	71	E	5	2.2	.....	0	0	.....	.....	0	0	Clear	
Ft. St. Michael, Alaska	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Fort Sill, Indian Ter.	29.04	737.6	30.21	767.3	35	1.7	61	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Fort Sully, Dakota	28.30	718.8	29.99	761.7	37	2.8	71	NW	12	5.4	.....	0	2s	.....	SE	0	0	Fair	
Florence, Arizona	28.51	724.1	30.04	763.0	55	12.8	.....	S	.....	.....	.....	0	0	.....	.....	0	0	Clear	
Galveston, Tex.	.....	.....	30.42	772.7	60	10.0	86	N	6	2.7	.....	5cs	0	W	.....	0	0	Fair	
Grand Haven, Mich.	.....	.....	30.01	762.2	30	— 1.1	78	S	18	8.0	.....	1c	0	.....	.....	0	0	Clear	
Indianapolis, Ind.	.....	.....	30.24	768.1	26	— 3.3	70	S	4	1.8	.....	2ck	0	.....	.....	0	0	Clear	
Indianola, Tex.	.....	.....	30.43	772.9	51	10.6	72	NE	4	1.8	.....	.....	10s	.....	.....	0	0	Cloudy	
Jacksonville, Fla.	.....	.....	30.34	770.6	40	4.4	64	NW	4	1.8	.....	2c	0	SW	.....	0	0	Clear	
Keokuk, Iowa	.....	.....	30.00	762.5	36	3.3	63	SW	12	5.4	.....	0	0	.....	.....	0	0	Clear	
Key West, Fla.	.....	.....	30.29	769.4	67	13.9	81	N	12	5.4	.....	5cs	0	.....	.....	0	0	Fair	
Kittyhawk, N. C.	.....	.....	30.20	767.1	35	1.7	44	W	16	7.2	.....	0	0	.....	.....	0	0	Clear	
Knoxville, Tenn.	.....	.....	30.36	771.1	28	— 2.2	67	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
La Crosse, Wis.	.....	.....	29.86	758.4	36	2.2	70	S	16	7.2	.....	Haze	Haze	.....	.....	0	0	Hazy	
Leavenworth, Kan.	.....	.....	30.12	765.0	37	2.8	80	S	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Louisville, Ky.	.....	.....	30.32	770.1	28	— 2.2	77	S	4	1.8	.....	0	Sm'e	.....	.....	0	0	Clear	
Lynchburg, Va.	.....	.....	30.23	767.8	32	0.0	46	SW	2	0.9	.....	0	0	.....	.....	0	0	Clear	
Malone, N. Y.	.....	.....	29.87	758.7	12	—11.1	80	W	12	5.4	.....	.....	10s	.....	W	0.03	0.8	Cloudy	
Marquette, Mich.	.....	.....	29.75	755.6	34	1.1	79	S	4	1.8	.....	.....	10s	.....	.....	0	0	Cloudy	
Memphis, Tenn.	.....	.....	30.35	770.9	38	3.3	71	SW	2	0.9	.....	1c	Fog	SW	.....	0	0	Clear	
Milwaukee, Wis.	.....	.....	29.99	761.7	29	— 1.7	67	SW	10	4.5	.....	0	0	.....	.....	0	0	Clear	
Mobile Ala.	.....	.....	30.42	772.7	37	2.8	80	N	2	0.9	.....	5c	0	.....	.....	0	0	Fair	
Montgomery, Ala.	.....	.....	30.39	771.9	39	3.9	76	SW	1	0.4	.....	0	Sm'e	.....	.....	0	0	Clear	
Morgantown, W. Va.	29.11	739.4	30.24	768.1	25	— 3.9	55	N	1	0.4	.....	0	0	.....	.....	0	0	Clear	
Mt. Washington, N. H.	22.83	579.9	29.19	741.4	—11	—23.9	100	NW	108	48.3	.....	.....	Fog	.....	.....	0.04	1.0	Foggy	
Nashville, Tenn.	.....	.....	30.35	770.9	31	— 0.6	79	Calm	0	0	.....	0	Fog	.....	.....	0	0	Clear	
New Haven, Conn.	.....	.....	29.81	757.2	26	— 3.3	67	NW	15	6.7	.....	Haze	0	.....	.....	Inap.	Inap.	Clear	
New London, Conn.	.....	.....	29.75	755.6	23	— 5.0	60	NW	21	9.4	.....	0	8s	.....	N	Inap.	Inap.	Clearing	
New Orleans, La.	.....	.....	30.40	772.1	46.5	8.1	65	Calm	0	0	.....	7ck	Sm'e	W	NE	0	0	Fair	
Newport, R. I.	.....	.....	29.70	754.4	21	— 6.1	72	NW	22	9.8	.....	.....	10s	.....	W	0	0	Cloudy	
New York, N. Y.	.....	.....	29.91	759.7	24	— 4.4	61	NW	24	10.7	.....	0	0	.....	.....	Inap	Inap.	Clear	
Norfolk, Va.	.....	.....	30.19	766.8	33	0.6	69	NW	4	1.8	.....	0	0	.....	.....	0	0	Clear	
North Platte, Neb.	27.12	688.8	29.82	757.4	26	— 3.3	77	W	9	4.0	.....	0	0	.....	.....	0	0	Clear	
Omaha, Neb.	28.88	733.5	29.99	761.7	30	2.2	80	S	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Oswego, N. Y.	.....	.....	30.04	763.0	20	— 6.7	78	NW	16	7.2	.....	Haze	2cs	.....	.....	Inap.	Inap.	Fair	
Pembina, Dakota	.....	.....	29.89	759.2	20	— 1.7	68	NW	30	13.4	.....	0	0	.....	.....	0	0	Clear	
Philadelphia, Pa.	.....	.....	30.03	762.7	24	— 4.4	62	NW	16	7.2	.....	0	0	.....	.....	0	0	Clear	
Pike's Peak, Col.	17.78	451.6	29.99	761.7	6	—14.4	37	SW	2	0.9	.....	0	0	.....	.....	0	0	Clear	
Pittsburgh, Pa.	.....	.....	30.20	767.1	22	— 5.6	72	NW	2	0.9	.....	0	0	.....	.....	0	0	Clear	
Port Huron, Mich.	.....	.....	30.12	765.0	20	— 6.7	85	S	4	1.8	.....	.....	10n	.....	.....	Inap.	Inap.	Light snow	
Portland, Me.	.....	.....	29.50	749.3	18	— 7.8	84	W	15	6.7	.....	.....	10n	.....	.....	0.02	0.5	Light snow	
Portland, Oregon	.....	.....	30.06	763.5	49	9.4	80	S	3	1.3	.....	.....	10s	.....	.....	0	0	Cloudy	
Punta Rassa, Fla.	.....	.....	30.35	770.9	60.5	10.3	64	N	11	4.9	.....	1cs	0	SW	.....	0	0	Clear	
Rochester, N. Y.	.....	.....	30.09	764.3	16	— 8.9	83	W	6	2.7	.....	1c	0	N	.....	0.02	0.5	Clear	
Salt Lake City, Utah.	25.90	657.8	30.23	767.8	29	— 1.7	78	W	1	0.4	.....	0	0	.....	.....	0	0	Clear	
Sandy Hook, N. J.	.....	.....	29.92	760.0	27	— 2.8	77	NW	40	17.9	.....	0	0	.....	.....	0	0	Clear	
San Diego, Cal.	.....	.....	30.18	766.6	53	11.7	86	NE	4	1.8	.....	0	0	.....	.....	0	0	Clear	
San Francisco, Cal.	.....	.....	30.16	766.1	53	11.7	93	W	2	0.9	.....	0	Fog	.....	.....	0	0	Fair	
Santa Fé, N. M.	23.36	593.3	29.90	759.4	23	— 5.0	73	NE	9	4.0	.....	0	0	.....	.....	0	0	Clear	
Savannah, Ga.	.....	.....	30.31	769.9	39	3.9	63	W	9	4.0	.....	1c	Sm'e	.....	.....	0	0	Clear	
Shreveport, La.	.....	.....	30.44	773.2	41	5.0	91	Calm	0	0	.....	5cs	Sm'e	.....	.....	0	0	Fair	
Smithville, N. C.	.....	.....	30.26	768.6	35	1.7	45	N	3	1.3	.....	0	0	.....	.....	0	0	Clear	
Springfield, Mass.	.....	.....	29.78	756.4	22	— 5.6	57	NW	9	4.0	.....	1c	0	N	.....	0	0	Clear	
St. Louis, Mo.	.....	.....	30.25	768.9	35	1.7	70	SW	10	4.5	.....	0	0	.....	.....	0	0	Clear	
St. Marks, Fla.	.....	.....	30.38	771.6	34	1.1	90	N	4	1.8	.....	2c	0	.....	.....	0	0	Clear	
St. Paul, Minn.	.....	.....	29.80	756.9	32	0.0	79	S	1	0.4	.....	0	0	.....	.....	0	0	Clear	
St. Paul's Island, Alaska	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Thatcher's Island, Mass.	.....	.....	29.59	751.6	19	— 7.2	64	NW	36	16.1	.....	.....	10s	.....	NW	0	0	Cloudy	
Toledo, Ohio.	.....	.....	30.16	766.1	26	— 3.3	76	S	7	3.1	.....	2cs	Haze	.....	.....	0	0	Fair	
Tucson, Arizona.	27.69	703.3	30.24	768.1	40	4.4	.....	S	.....	.....	.....	0	0	.....	.....	0.06	1.5	Clear	
Tybee Island, Ga.	.....	.....	30.29	769.4	39	3.9	71	W	10	4.5	.....	1c	Sm'e	W	.....	0	0	Clear	
Vicksburg, Miss.	.....	.....	30.44	773.2	40	4.4	76	SE	4	1.8	.....	8c	Sm'e	.....	SE	0	0	Fair	
Virginia City, M. T.	24.40	621.8	29.94	760.5	20	— 6.7	64	SE	2	0.9	.....	0	0	.....	.....	0	0	Clear	
Washington, D. C.	.....	.....	30.15	765.8	27	— 2.8	77	W	4	1.8	.....	0	Sm'e	.....	.....	0	0	Clear	
Wilmington, N. C.	.....	.....	30.27	768.8	33	0.6	51	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	

UNITED STATES SERIES.—CONTINUED.

STATIONS.	BAROMETER. Corrected for instrum'tal error and temperature. Inches.	BAROMETER. Corrected for instrum'tal error and temperature. Millimeters.	BAROMETER. Reduced to sea-level. Inches.	BAROMETER. Reduced to sea-level. Millimeters.	TEMPERATURE OF THE AIR. Fahrenheit.	TEMPERATURE OF THE AIR. Centigrade.	RELATIVE HUMIDITY. Per cent.	WIND. Direction. From—	WIND. Velocity. Miles per hour.	WIND. Velocity. Meters per second.	WIND. Force. 0—10.	CLOUDS. Amount. Upper. 0—10.	CLOUDS. Amount. Low'r 0—10.	CLOUDS. Direction. Upper. From—	CLOUDS. Direction. Lower. From—	RAIN-FALL OR MELTED SNOW IN THE PAST 24 HOURS. Inches.	RAIN-FALL OR MELTED SNOW IN THE PAST 24 HOURS. Millimeters.	WEATHER.	OBSERVER.
Wood's Holl, Mass	.....	.....	29.68	753.9	22	— 5.6	59	NW	29	13.0	.....	.....	10s	.....	NW	0	0	Cloudy	
Yankton, Dakota	28.68	728.5	30.02	762.5	30	— 1.1	73	SW	1	0.4	.....	5c	0	W	.....	0	0	Fair	
Yuma, Arizona	.....	.....	30.15	765.8	56	13.3	.....	N	.....	.....	.....	0	0	.....	.....	0.04	1.0	Clear	
SUB-SERIES.																			
Kingston, Jamaica, W. I	.....	.....	30.27	768.8	75	23.9	76	N	6	2 7	.....	2c	2s	.....	.....	0.11	2.8	.....	James Gall.
Navassa, W. I	.....	.....	.....	.....	78	25.6	.....	NE	.....	.....	3	.....	.....	.....	.....	0	0	.....	Dr. G. H. Davison.
Clifton, Ja., W. I	27.27	692.6	30.06	763.5	68	20.0	79	N	1.0	0.4	.....	2c	0	N	.....	0	0	Fine	C. Partridge.
Paramaribo, D. Guiana, S.A	.....	.....	30.07	763.8	80	26.7	82	E	.....	.....	2	3c	4s	.....	.....	0	0	Clear	C. J. Hering.
Batavia, Dutch Guiana, S.A	30.11	764.7	.....	.....	80.2	26.8	.....	E	.....	.....	.....	.....	.....	.....	.....	0	0	Fair	Dr. H. Groot.
Medellin, Colombia, S. A	25.29	642.4	.....	.....	70.5	21.4	62	Calm	.....	.....	0	6cs	2ks	.....	.....	0	0	Cloudy	Thomas Herran.
York Factory, B. A	.....	.....	30.07	763.8	— 9.0	—22.8	78	W	12	5.4	.....	6k	0	W	.....	0	0	Gloomy	J. Fortescue, W. Wood
Honolulu, Oahu, H. I	.....	.....	30.05	763.3	71	21.7	95	SSE	.....	.....	4	.....	.....	.....	.....	0	0	Clear	Daniel Smith.
Makawao, Maui, H. I	.....	.....	29.93	760.2	65	18.3	73	S	.....	.....	1	0	0	.....	.....	0	0	.....	F. L. Clarke.

NOTE.—The originals give the amount of cloudiness by the scale 0 to 4, except York Factory, Makawao, Medellin and Paramaribo. The elevation of the barometer at Bismarck is 1,677 feet, or 511.1 meters; Cheyenne, 6,057.3 ft., or 1,846.2 m.; Clifton, about 2,602 ft., or 881.5 m.; Denver, 5,135 ft., or 1,565.2 m.; Dodge City, 2486ft., or 757.5 m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Florence, 1,550 (?) ft., or 472.5 (?) m.; Makawao, 2,205 ft., or 672.1 m.; Morgantown, 1,027.9 ft., or 313.3 m.; Medellin, 4,876 ft., or 1,486.2 m.; Mt. Washington, 6,285 ft., or 1,915.6 m.; North Platte, 2,846 ft., or 867.4 m.; Omaha, 1,054.6 ft., or 321.4 m.; Pike's Peak, 14,150.7 ft., or 4,313.1 m.; Salt Lake City, 4,362.2 ft., or 1,329.6 m.; Santa Fé, 6,862.2 (?) ft., or 2,091.6 (?) m.; Tucson, 2,545 (?) ft., or 775.7 (?) m.; Virginia City, 5,480 (?) ft., or 1,670.3 (?) m.; Yankton, 1,278 ft., or 389.5 m. The following constants are added in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Denver, 5.22 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.38 in.; Santa Fé, 6.54 in.; Tucson, 2.59 in.; Virginia City, 5.48 in. The elevation of Batavia is about 6 feet; the barometric readings need the addition of 0.2 mm. or 0.01 in. for reduction to sea-level.

UNITED STATES NAVAL SERIES.

By authority of the **SECRETARY OF THE NAVY.**

Furnished by the coöperation of the Navy Department, through Commodore Daniel Ammen, U. S. N., Chief of Bureau of Navigation.

STATIONS AND VESSELS.	True course toward—	Hourly rate in knots.	*Barometer as reported.		Temperature of the Air.		Relative Humidity.	Wind.				Clouds.				Rain-fall or melted snow in the past 24 hours.		State of Ocean.	Direction of swell from—	Weather.	Observer.
								Direction.	Velocity		Force.	Amount.		Direction.							
												Up'er	Low't	Up'er	Low't						
			Inches.	Millimeters.	Fahrenheit.	Centigrade.	Per cent.	From—	Miles per hour.	Meters per second.	0—10.	0—10.	0—10.	From—	From—	Inches.	Millimeters.				
Naval Academy, Annapolis, Md.			29.74	755.4	32	0.0	50	WNW			3		0			0	0			Clear	
Naval Hospital, Annapolis, Md.			30.11	764.8	26	— 3.3	100	NW			2		0			0	0			Fair	
Navy Yard, Mare Island, Cal.			30.23	767.8	51	10.6		WNW			2		2			0	0			Dense fog	
Navy Yard, Norfolk, Va.			30.26†	768.6†	30	— 1.1	89	NW	5	2.2			0			0	0			Blue sky	
Navy Yard, Pensacola, Fla.			30.42	772.7	37	2.8		NW			2		5		NE	0	0			‡D. clouds	
Navy Yard, Portsmouth, N.H.			29.54	750.3	17.5	— 8.1		NW	16	7.2			10			0	0			Cloudy	
¶ Canonicus, New Orleans, La.			30.32	770.1	45	7.2	92	S			1		5		E					Hazy	
Colorado, New York, N. Y.			29.95	760.7	28	— 2.2		WNW	35	15.6			1		S&E	0	0			‡D. clouds	
Essex, N. 23°, 59′, W. 90°, 0′			30.35	770.9	75	23.9	72	NNE			5		6		SSW			Moderate.	NNE	‡D. clouds	
Gettysburg, Nice, France			29.85	758.2	60	15.6		WNW			2		0					Light	SE	Blue sky	
Hartford, Hampton Roads, Va.			30.27	768.8	41	5.0		W			3		0			0	0			Pleasant	
Lackawana, Mare Island, Cal.			30.20	767.1	54	12.2	93	Calm			0							Smooth		Foggy	
Marion, Port Said, Egypt			30.24	768.1	61	16.1	88	W			2		3		E			Smooth		‡D. clouds	
Michigan, Erie, Pa.			29.52	749.8	21	— 6.1	71	WNW			2		10		W					Cloudy	
Monongahela, Baltimore, Md.			30.04	763.0	30	— 1.1		SW			2		0							Hazy	
New Hampshire, Port Royal, S. C.			30.42	772.7	47	8.3		W			2		9		NE					‡D. clouds	
Omaha, Panama			30.12	765.0	76	24.4	91	NW			2		8		S	0	0	Smooth		Pleasant	
Ossipee, Pensacola, Fla.			30.42	772.7	49	9.4		NW			1		2							‡D. clouds	
Pensacola, Panama			30.11	764.8	78	25.6	91	NNW			1		2			0	0			Pleasant	
Plymouth, New Orleans, La.			30.44	773.2	48	8.9	70	W			1		6		W					Hazy	
¶ Rio Bravo, Matamoras, Mex.			30.27	768.8	45	7.2		N			1		10							Raining	
Santee, Annapolis, Md.			30.15	765.8	32	0.0		WNW			3		0							Clear	
St. Louis, League Island, Pa.			29.91	759.7	26	— 3.3		NW	14	6.3			0			0	0			Clear	
Vandalia, Constantinople, Turkey.			30.20	767.1	54	12.2	93	SW			1		1		NE					‡D. clouds	
Wabash, Boston, Mass.			29.67	753.6	21	— 6.1		WNW	17	7.6						0	0			Overcast	
Wyoming, Washington, D.C.			30.14	765.5	29	— 1.7		WNW			1		0								

* It is not known that the barometer is corrected for temperature, instrumental error or elevation. † Aneroid Barometer. ‡ Detached clouds. ¶ Barometer corrected for instrumental error and reduced to sea-level.

UNITED STATES MARINE SERIES

REPORTED TO THE OFFICE OF THE CHIEF SIGNAL OFFICER OF THE ARMY.

NAMES OF VESSELS.	True course toward—	Hourly rate in knots.	Barometer reduced to sea-level.		Temperature of the Air.		Relative Humidity.	Wind.				Clouds.				State of Ocean.	Direction of swell from—	Weather.	OBSERVER.
								Direction.	Velocity.		Force.	Amount.		Direction.					
												Up'er	Low'r	Upper.	Lower.				
			Inches.	Millimeters.	Fahrenheit.	Centigrade.	Per cent.	From—	Miles per hour.	Meters per second.	0—10.	0—10.	0—10.	From—	From—				
PACIFIC MAIL S. S. CO. MARINE SERIES. Furnished by the coöperation of ————, President; Williams, Blanchard & Co., Agents.																			
S. S. City of Peking																			Lt. Z. L. Tanner, U.S.N
OCCIDENTAL AND ORIENTAL S. S. CO. MARINE SERIES. Furnished by the coöperation of George H. Bradbury, President; T. H. Goodman, Agent.																			
S. S. Belgic																			Capt. John Metcalf.
S. S. Gaelic																			Capt. W. H. Kidley.
S. S. Oceanic																			Capt. H. Parsell.
NORTH GERMAN LLOYD OF BREMEN MARINE SERIES. Furnished by the coöperation of A. Schumacher & Co., Agents.																			
S. S. Baltimore																			Capt. H. Andressen.
S. S. Berlin																			Capt. C. Pohle.
S. S. Braunschweig																			Capt. K. Undütsch.
S. S. Nürnberg N. 48°, 40′, W. 19°, 28′	E ½ N		30.27	768 8	50.0	10.0		NW			4–5		.kn		ENE	Light sea	W	Raining	Capt. A. Jaeger.
S. S. Ohio																			Capt. G. Meyer.
MARINE SERIES. (Miscellaneous.) Furnished by the coöperation of the Observer named.																			
Schooner Addie Fuller, N. 33°, 09′, W. 78°, 44′	E by N	3	30.18	766.6	48	8.9	56	NNE	9	4.0		0	0			Short sea.		Clear	Capt. James Jorgensen

NOTE.—The schooner Addie Fuller gives the amount of cloudiness by the scale 0 to 4.

COLLATED AT THE OFFICE OF THE CHIEF SIGNAL OFFICER OF THE ARMY, WASHINGTON, D. C.

The records which appear in this Bulletin are copied from the regular exchanges of this office, made in each instance in compliance with an especial request and are published for the uses of the coöperating observers. The barometric readings in the first two columns are reduced to freezing and their respective standards; those in the second two also to mean sea-level. The "weather" is generally published as given.

When the distinction between the upper and lower strata of clouds is not reported, the *kinds* or *types*, viz: cirrus, cumulus, stratus, nimbus, scud, fracto, pallio, haze, fog and smoke, as indicated, respectively, by the letters c, k, s, n, d, f, p, hz., fg. and sm'e, are generally published with the amount in the lower-cloud column. The distinction between the upper and lower strata is carefully made in the United States Series and a portion of the Canadian Series, and the types are indicated by the above letters or their combinations in the proper column.

Albert J. Myer

Brig. Gen. (Bvt. Ass't,) Chief Signal Officer, U. S. A.

BULLETIN

OF

INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON FEBRUARY 19, 1877.

7:35 A. M. WASHINGTON mean time.

6:7 A. M. MEXICO mean time.
7:7 A. M. SAN JOSE mean time.
0:6 P. M. LISBON mean time.
0:28 P. M. MADRID mean time.
0:43 P. M. GREENWICH mean time.
0:53 P. M. PARIS mean time.
1:1 P. M. BRUSSELS mean time.
1:4 P. M. UTRECHT mean time.
1:18 P. M. BERNE mean time.
1:26 P. M. CHRISTIANIA mean time.

1:33 P. M. COPENHAGEN mean time.
1:33 P. M. ROME mean time.
1:37 P. M. BERLIN mean time.
1:49 P. M. VIENNA mean time.
1:55 P. M. STOCKHOLM mean time.
2:18 P. M. ATHENS mean time.
2:39 P. M. CONSTANTINOPLE mean time.
2:44 P. M. ST. PETERSBURG mean time.
6:36 P. M. CALCUTTA mean time.
10:2 P. M. TOKEI mean time.

ALGERIAN SERIES.

Furnished by the coöperation of General d'Eudeville, Commandant Supérieur du Génie in Algeria.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Nemours			30.26	768.6	59.0	15.0		NW			5		7			0.039	1.0	Cloudy	Michel.
Algiers			30.12	765.1	59.0	15.0		NE			1		2			0	0	Clear	Biscarrat.
La Calle			30.05	763.2	59.4	15.2		NNW			3		3			0	0	Fair	Fleury.
Tunis			30.13	765.2	59.2	15.1		NW			4		6			0	0	Fair	Jacques.
Sfax																			
Saida			30.18	766.5	57.4	14.1		NNE			5		6			0	0	Fair	Millot.
Tebessa			30.08	763.9	40.1	4.5		N			2		2			0	0	Clear	Bourgeois.
Geriville			30.10	764.5	59.4	15.2		ENE			5		5			Inap.	Inap.	Fair	Lemaillot.
Laghouat			30.09	764.2	59.7	15.4		E			6		6			0	0	Fair	Guyot.
Biskra			30.09	764.2	71.6	22.0		Calm			0		5			0	0	Fair	Kunts.

NOTE.—In the originals the distinction between the amount of upper and lower clouds is apparently not made. The weather is published as given. The rain-fall is measured at 7 a. m., local time.

AUSTRIAN SERIES.

Furnished by the cooperation of Professor Dr. Julius Hann, Director of the Imperial and Royal Central Meteorological Institute at Vienna.

Agram			30.11	764.9	48.7	9.3	50	Calm			0		4			0	0		Prof. Ivan Stozir.
Cracow, I. R. Observatory			30.10	764.4	42.8	6.0	57	NE			1		2			0	0		Dr. Wierzbiski.
Eperies			30.05	763.2	41.0	5.0	78	Calm			0		1cs			0.108	2 75		Julius Mikolik.
Gratz	28.84	732.5	30.13	765.2	43.2	6.2	63	ENE			3		2			0	0		Andreas Rospini.
Hermannstadt	28.56	725.4	30.02	762.6	39.4	4.1	90	NW			1		10			0	0		Prof. Reissenberger.
Kremsmünster	28.65	727.6	30.02	762.5	41.4	5.2	66	NE			1		2			0	0		Prof. C. Wagner.
Lemberg			30.09	764.3	37.0	2.8	89	SE			2		6			0.031	0.8		Dr. T. Stanecki.
Nyiregyhaza																			Habzsuda Daniel.
Pola			30.10	764.6	50.2	10.1	53	ENE			1		0			0	0		I.R.Hydrographic Office.
Szegedin			30.07	763.8	42.1	5.6	79	Calm			0		10			0.031	0.80		Karl Stancel.
Trieste			30.13	765.2	50.2	10.1	50	Calm			0		0			0	0	Clear	Prof. V. Farolfi.
Vienna			30.08	764.1	44.2	6.8	54	ESE			1		0			0	0		I. R. Central Met. Obs'y.

No. —.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 7 p. m., local time. The elevation of Gratz is 343.5 meters, or 1,126.9 feet; Hermannstadt, 407.8 meters, or 1,337.9 feet; Kremsmünster, 383.6 meters, or 1,258.5 feet.

BELGIAN SERIES.

Furnished by the cooperation of J. C. Houzeau, Director of the Royal Observatory at Brussels.

Arlon			29.92	759.9	40.8	4.9	95	SW			4		10			0.720	18 3	Raining	Royal Observatory.
Brussels			29.85	758.1	43.2	6.2	86	WNW			2		10n		NW	0.463	11.50	Light rain	
Furnes			29.85	758.1	46.8	8.2	79	W			2		6			0.220	5.6		
Maeseyck			29.80	756.8	45.7	7.6	92	SSW			6		10			0.248	6.3	Raining	

NOTE.—In the originals, the weather is occasionally given in general notes.

BRITISH SERIES

Furnished by the coöperation of Robert H. Scott, Esq., Director of the Meteorological Office, London, Alexander Buchan, Secretary of the Scottish Meteorological Society, Edinburgh, and the respective Observers.

STATIONS.	Barometer. Corrected for instrumental error and temperature. Inches.	Barometer. Corrected for instrumental error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Aberdeen			29.49	749.0	41.9	5.5		SW	15	6.7			1			0	0	Blue sky	William Boswell.
Ardrossan			29.60	751.8	38	3.3		WSW			4		9					Sleeting	William McNeil.
Armagh, Observatory			29.72	754.6	41.4	5.2		SW	17	7.6			10					Overcast	S. Call, for Dr. Robinson.
Bidston (Liverpool Obs.)			29.75	755.6	43.1	6.2		W	37	16.5			4					*D. clouds	John Hartnup.
Birr Castle, (Parsonstown)			29.83	757.7	42.0	5.6		WSW			1–2		10					Raining	J. Dreyer.
Bradford			29.71	754.6	45.6	7.6		W			3		10			0.12	3.0	Rain & hail	J. McLandsborough.
Bridgetown, (Barbados)			30.07	763.8	82	27.8		NE			1		7					*D. clouds	Sergt. J. F. Halanen, A.
Cambridge, Observatory			29.83	757.7	48.0	8.9		W			1		1			Blank	Blank	*D. clouds	H. Todd. [H.C.
Cardington			29.84	757.9	44.0	6.7		NW			1		1					Blue sky	John McLaren.
Carlisle																			T. Bell, for J. Cartmell.
Chatham, School M. E.			29.90	759.4	42.2	5.7		W			2		8					*D. clouds	Maj. C. N. Martin, R.E.
Dartmoor	28.48	723.4	30.02	762.5	40.0	4.4		NW			5		6					*D. clouds	R. E. Power.
Davos Platz, (Switzerland)	24.80	629.9			36.2	2.3	65	Calm			0		2			0	0	Blue sky	Francis Redford, M. A.
Donaghadee			29.65	753.1	41	5.0		WSW			5		8					*D. clouds	J. Mac Gowan.
Dover			29.83	758.1	45	7.2		WNW			3		6					½ Clouded	J. Costello.
Eccles, (near Manchester)			29.76	755.6	40.7	4.8		SW	7.2	3.2			5					Showery	Thomas Mackereth.
Falmouth, Observatory			30.02	762.5	47.0	8.3		W			5		6					Overcast	The Staff.
Fort Napier, (Natal)	27.54	699.5	29.78	756.4	91.0	32.8		E			1		3					Blue sky	P'vt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.92	760.0	89	31.7		N			1		4					*D. clouds	
Galway, Queen's College			29.71	754.6	46	7.8		W			3		10					Raining	Prof. A. H. Curtis.
Gibraltar, (Mediterranean)			30.23	767.8	67.0	19.4		W			3		2					Blue sky	Corpl. C. Aitken, A.H.C.
Glasgow, Observatory			29.56	750.8	40.2	4.6		SW			2		4					Blue sky	Lewis Stuart.
Great Yarmouth			29.79	756.7	48	6.1		NW			3		4					Hazy	G. T. Watson.
Greenwich, Royal Obs'y			29.88	758.9	45.6	7.6		W			2		6			Blank	Blank	*D. clouds	The Staff, for G. B. Airy.
Guernsey			30.02	762.5	47	8.3		NW			4		3					*D. clouds	Dr. S. E. Hoskins.
Helston			30.02	762.5	50	10.0		NW			6		4c			0	0	Fine	M. P. Moyle.
Holyhead			29.74	755.4	44	6.7		W			5		4					*D. clouds	John Tilston.
Kew, Observatory			29.89	759.2	45.4	7.4		W	16	7.2			5					*D. clouds	The Staff.
Kingstown			29.80	756.9	44	6.7		W			4		6					*D. clouds	George Mitchell.
Leicester Museum			29.79	756.7	44.3	6.8		W			6		5					*D. clouds	Wm. J. Harrison, F.G.S.
Malta, (Mediterranean)			29.89	759.2	58.6	14.8		NW			3		6k					*D. clouds	Corp'l. P. Bravis, A.H.C.
Nairn			29.44	747.8	41	5.0		W			1		2					½ clouded	W. D. Penny.
Nassau, (Bahamas)			30.16	766.1	67.4	19.7		N			1		2					*D. clouds	Surg. Maj. Henry.
Nottingham, Observatory			29.81	757.2	45.3	7.4		SW			3		7k, ks		W	0.104	2.64	*D. clouds	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			29.82	757.4	42.1	5.6		WSW			4		9					*D. clouds	Rev. Stephen Whitty.
Oxford, Radcliff Obs'y			29.86	758.4	45	7.2		W			2		8					Overcast	J. Lucas.
Plymouth			29.98	761.5	49.5	9.7		NW			2		6					*D. clouds	John Merrifield.
Roche's Point			29.94	760.5	47	8.3		WNW			4		8					Dull	W. Kennedy.
Saint Ann's Head			29.90	759.4	45	7.2		WNW			6		7					*D. clouds	John C. Walker.
Saint Helier, (Jersey)			30.01	762.2	48.6	9.2		NW			3		2					¼ clouded	A. P. Amy.
Sandwick Manse, (Orkneys)			29.36	745.7	37.6	3.1		WSW	17	7.6			3					Showery	Rev. C. Clouston, LL. D.
Scarborough																			F. Shaw.
Scutari Cemetery, (Turkey)			30.03	762.7	64.0	12.2		SSE			2		8			Blank	Blank	*D. clouds	Sergt. W. H. Lyne.
Sheffield			29.76	755.9	43.4	6.3		WSW			3		8			0.463	11.76	Overcast	W. F. Cooper.
Silloth Rectory			29.64	752.8	43.0	6.1	82	NW			5		4			0.380	9.65	*D. clouds	Rev. Francis Redford
Stonyhurst, Observatory			29.73	755.1	38.1	3.4		W			4		8					*D. clouds	Rev. S. J. Perry.
Stornoway, Lewis C., (Hebr.)			29.35	745.5	39	3.9		SW			2		5					*D. clouds	John Smith.
Stratfield Turgiss			29.93	760.2	46.6	8.1		NW			2		3					*D. clouds	Rev. Charles H. Griffith.
Thurso			29.39	746.5	43	6.1		SSW			2		4					*D. clouds	John Trotter.
Truro, Royal Institution			29.99	761.7	50	10.0		NW			7		10					Raining	W. Newcombe.
Valencia, Observatory			29.97	761.2	45.0	7.2		W	25	11.2			10					Raining	The Staff.
SUB-SERIES.																			
Calf of Man, (Isle of Man)																			Henry Mercer.
Cape Good Hope, Obs'y			30.11	764.8	75.7	24.7	48	SE	22	9.8		1	2						The Staff, for E. J. Stone.
Hobart Town, (Tasmania)			29.73	755.1	69.0	20.6	73	W			3		3k			0.03	0.8		Francis Abbott, F.R.A.S.
Leith, Restalrig Park			29.57	751.1	41.9	5.5		W			4		8k			0	0	Cloudy	Andrew Gibb.
Mauritius, Observatory			29.97	761.2	81.7	27.6	66	E	13.0	5.8		5	1	SSE	E	0.04	1.0	Fine	C. Meldrum.
Melbourne, Observatory			30.02	762.5	64.0	17.8	74	SE	7	3.1			10			0	0	Dull	R. L. J. Ellery.
Monach L't-house, (Hebrides)																			J. Youngclause.
North Unst, (Shetland Is.)																			Robert Burnet.

NOTE.—Generally, the originals do not give the relative humidity, rain-fall, or distinction between upper and lower clouds. The originals give the wind direction to 32 points and weather by the Beaufort notation. The originals give the barometer for Aberdeen, Cardington, Freetown, Galway, Oxford, St. Helier, Sandwick, Scarborough, Stonyhurst, Leith, Monach and North Unst as read off and the amount of cloudiness for Stornoway by the scale 0 to 4. The wind-force is given by the scale 0 to 12 in the official series; 0 to 6 in the sub-series; except in lbs. per square foot for Greenwich and Hobart Town. The rain-fall is measured at Aberdeen at 10 a. m.; Bradford, 9 a. m.; Hobart Town, 7:30 a. m.; Nottingham, 6 p. m.; Mauritius, 9 a. m., local time. The elevation of Dartmoor is 1,400 feet, or 426.7 meters; Davos Platz, 5,167 feet, or 1,550.02 meters; Fort Napier, 2,200 feet, or 670.6 meters. *Detached clouds.

By authority of the MINISTER OF FOREIGN AFFAIRS.

COSTA RICA SERIES.

Furnished by the coöperation of Senor Federico Maison, Director of the Central Office of Statistics and Meteorology.

San José																			

DANISH SERIES.

Furnished by the cooperation of Captain N. Hoffmeyer, Director of the Royal Danish Meteorological Institute at Copenhagen.

Copenhagen			29.70	754.3	34.5	1.4	98	S			4		10					Foggy	
Fanöe			29.64	752.9	40.5	4.7	94	W			2		9						
Godthaab, (Greenland)			30.07	763.7	16.9	— 8.4	100	S			6		10						
Stykkisholm, (Iceland)			29.32	744.8	26.8	— 2.9	96	E			4		8						
Thorshavn, (Faröe)			29.27	742.2	38.3	3.5	80	S			2		5						
Vestervig			29.58	751.2	35.6	2.0	98	SSW			2		10						

NOTE.—The originals give the wind-force by the scale 0 to 6; occasionally, weather by Vienna symbols; no distinction between the amount of upper and lower clouds.

FRENCH SERIES.

Furnished by the co operation of His Excellency, U. J. Le Verrier, Director of the Paris Observatory, and the respective Observers.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather	Observer.
Alençon	.....	.....	30.01	762.3	48.2	9	91	W	.....	.....	1	.....	10	.....	.....	0.16	4.	Covered	Normal School.
Amiens	.....	.....	29.93	760 2	49.6	9.8	76	ENE	.....	.....	3	.....	5	.....	.....	0.150	3.8	Cloudy.....	Normal School.
Avignon	.....	.....	30.09	764.2	56.8	13.8	35	NNE	.....	.....	1	.....	10	.....	.....	0	0	Covered	Normal School.
Bar-sur-Seine	.....	.....	29.98	761.5	46.9	8.3	70	SW	.....	.....	2	.....	10	.....	.....	Inap.	Inap.	Covered	C. Saillard.
Beaumette, (near Angers)	.....	.....	29.98	761.4	45.5	7.5	80	NW	6.0	2.7	.....	.....	10	.....	NW	0.362	9.2	Raining.....	Beaumette Observ'tory.
Beauvais	.....	.....	29.94	760.4	48.9	9.4	85	WSW	.....	.....	2	.....	10	.....	WNW	0.087	2.20	Covered	Normal School.
Besançon	.....	.....	30.06	763.5	47.1	8.4	65	SSW	.....	.....	4	.....	5	.....	SW	0	0	Cloudy.....	Normal School.
Bourg en Bresse	.....	.....	30.12	765.1	48.9	9.4	58	N	.....	.....	4	.....	2cn	.....	N	0	0	Slightly cl'dy	Normal School.
Bourges	.....	.....	30.00	762.1	48.2	9	84	SW	.....	.....	2	.....	10	.....	W	0	0	Covered	Normal School.
Brest	.....	.....	30.05	763.3	48.7	9.3	52	NW	.....	.....	4	.....	3	.....	NW	0.256	6.50	.....	Naval Observatory.
Carcassonne	.....	.....	30.11	764.8	52.9	11.6	45	E	.....	.....	1	.....	5	.....	W	0	0	Cloudy.....	Normal School.
Caen	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Chartres	.....	.....	29.95	760.8	45.3	7.4	85	W	.....	.....	3	.....	10	.....	SSE	0	0	Covered	Normal School.
Châlons-sur-Marne	.....	.....	29.95	760.6	45.5	7.5	85	W	.....	.....	3	.....	10n	.....	.....	0.051	1.3	Covered	Normal School.
Clermont	.....	.....	30.02	762.6	48.2	9.0	63	SW	.....	.....	1	.....	10	.....	.....	0	0	.....	Puy de Dome Obs'y.
Commercy	.....	.....	30.10	764.6	44.4	6.9	92	WSW	.....	.....	2	.....	10	.....	.....	0	0	Covered	Normal School.
Commune de Gréasque*	.....	.....	30.12	765.0	54.5	12.5	29	SE	.....	.....	4	.....	8	.....	SE	0	0	.....	M. Kina.
Grenoble	.....	.....	30.04	763.1	47.1	8.4	63	NE	.....	.....	2	.....	8cs	.....	.....	0	0	Cloudy.....	Normal School.
La Roche-sur-Yon	.....	.....	30.02	762.6	45.0	7.2	88	NW	.....	.....	1	.....	10	.....	.....	0	0	Covered	Normal School.
Le Mans	.....	.....	30.00	761.9	43.7	6.5	91	W	.....	.....	4	.....	8	.....	W	0.12	3.	Very cloudy	Normal School.
Lons-Le-Saulnier	.....	.....	30.03	762.7	49.5	9.7	56	SW	.....	.....	2	.....	10	.....	.....	0.232	5.90	Raining.....	Normal School.
Lorient	.....	.....	30.11	764.8	46.4	8.0	67	NNW	.....	.....	3	.....	5	.....	NW	0.248	6.3	Cloudy.....	Naval Observatory.
Mâcon	.....	.....	30.16	766.1	45.7	7.6	83	SE	.....	.....	2	.....	10	.....	.....	0	0	Covered	Normal School.
Metz	.....	.....	30.01	762.3	43.3	6.3	93	SSW	.....	.....	4	.....	10	.....	.....	0.036	0.9	Covered	M. Schuster.
Mirecourt	.....	.....	30.00	762.1	45.7	7.6	72	S	.....	.....	2	.....	5	.....	N	0	0	Partly cov'd	Normal School.
Nismes	.....	.....	30.06	763.4	59.4	15.2	48	S	.....	.....	2	.....	..kn	.....	SW	0	0	.....	Normal School.
Orleans	.....	.....	29.95	760.8	44.6	7	91	SSW	.....	.....	2	.....	10	.....	SSW	0	0	Covered	Normal School.
Paris, Observatory	.....	.....	29.95	760.8	46.6	8.1	83	SW	.....	.....	2	.....	10n	.....	WSW	0.062	1.57	Rainy	National Observatory.
Parthenay	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Privas	.....	.....	30.15	765.8	49.1	9.5	58	NW	.....	.....	2	.....	5	.....	NW	0	0	Cloudy.....	Normal School.
Rochefort, Observatory	.....	.....	30.03	762.7	46.2	7.9	87	SSW	.....	.....	4	.....	10	.....	.....	0.43	11.	Raining	Naval Observatory.
Rouen	.....	.....	29.93	760.2	45.5	7.5	85	W	.....	.....	1	.....	10	.....	W	0.236	6.0	Covered	Normal School.
Saint Lo	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Tarbes	29.02	737.2	30.13	765.2	49.1	9.5	92	W	.....	.....	2	.....	10	.....	.....	0	0	Covered	Normal School.
Villefranche	.....	.....	30.07	763.6	47.3	8.5	75	ESE	.....	.....	2	.....	8	.....	E	0	0	Very cloudy	Normal School.
SUB-SERIES.																			
Fort de France, Martinique	.....	.....	29.93	760.3	73.8	23.2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	L'Abbé Marchési.
Marseilles	.....	.....	30.07	763.6	55.6	13.1	42	SE	.....	.....	1	.....	9	.....	.....	0	0	Covered	Marseilles Observatory.
Mont-Louis	24.86	631.4	30.17	766.4	44.6	7.0	35	SW	11.2	5.00	.....	.....	8	.....	SSW	0	0	.....	—. Falguère.
Montsouris, Paris	.....	.....	29.94	760.5	45.3	7.4	89	SW	.....	.....	2	.....	10	.....	SW	0.071	1.8	Light rain...	Montsouris Observatory
Perpignan	.....	.....	30.10	764.4	51.8	11.0	60	SE	3.7	1.67	.....	.....	6	.....	NE	0	0	.....	Dr. Fines.
Pic du Midi, (Summit,) H. P.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. Baylac.
Pic du Midi, (Plantade,) H. P.	22.42	569.5	.....	.....	28.4	— 2.0	.....	NNW	.....	.....	2	.....	10	.....	.....	0.059	1.5	Snowy.....	General de Nansouty.
Saint Maur, (near Paris)	.....	.....	29.95	760.6	45.0	7.2	94	SW	.....	.....	1	.....	10	.....	.....	0.024	0.6	Raining.....	E. Renou.
Toulouse	.....	.....	30.11	764.7	50.9	10.5	61	SW	.....	.....	1	.....	8	.....	.....	0	0	.....	Toulouse Observatory.
Tours	.....	.....	29.99	761.7	43.5	6.4	97	WSW	.....	.....	1	.....	10	.....	WNW	0	0	.....	C. Marquet.
Versailles, (near Paris)	.....	.....	29.95	760.8	45.7	7.6	86	W	.....	.....	1	.....	10	.....	.....	0.103	2.62	Light rain...	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai)	.....	.....	30.53	775.4	30.6	— 0.8	60	SSW	2.2	1.0	.....	.....	0	.....	.....	0	0	.....	Marc Dechevrens, S. J.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—Generally, the originals give the wind-force by the scale 0 to 7; no distinction between upper and lower clouds, and, in the official series, the amount by the scale 0 to 4 the rain-fall as measured at 7, 8 or 9 a. m., local time; at Clermont, 9 a. m. of the following day; the weather in general terms as published. The elevation of Clermont is 388 meters, or 1,272.9 feet; Commune de Gréasque, 322 meters, or 1,056.4 feet; Turbes, 308 meters, or 1,010 feet; Mont-Louis, 1,581.40 meters, or 5,214.8 feet; Pic du Midi, (Summit,) 2,877 meters, or 9,439.1 feet; Pic du Midi, Plantade,) 2,366 meters, or 7,762.6 feet. In correcting the Mont-Louis barometric observations for altitude, the constant 135. millimeters has been added. *Bouches-du-Rhône

GERMAN SERIES.

Furnished by the coöperation of Professor Dr. G. Neumayer, Director of the German Naval Observatory, Hamburg.

Bamberg	.....	.....	30.10	764.4	46.5	7.5	65	W	.....	.....	5	.....	10	W	.....	0.039	1.0	.....	Prof. T. Hoh
Berlin	.....	.....	29.93	760.2	47.3	8.5	78	SW	.....	.....	1	.....	10	.....	.....	0	0	.....	Prof. Arndt.
Breslau	.....	.....	30.04	762.9	46.0	7.8	56	SW	.....	.....	3	.....	5	.....	.....	0	0	.....	Royal University Obs'y.
Carlsruhe	.....	.....	29.95	760.8	47.1	8.4	59	SW	.....	.....	3	.....	10	.....	.....	0	0	.....	A. Sens.
Cassel	.....	.....	29.85	758.2	43.3	6.3	85	SW	.....	.....	5	.....	10	SW	.....	0	0	.....	Dr. H. Möhl.
Crefeld	.....	.....	29.77	756.2	46.9	8.3	86	S	.....	.....	4	.....	10	.....	.....	0.16	4.	Raining.....	Director Lose.
Emden	.....	.....	29.78	756.4	43.9	6.6	89	W	.....	.....	2	.....	10	.....	.....	0.220	5.6	.....	Prof. Prestel.
Frankfort on the Main	.....	.....	30.00	762.1	43.7	6.5	90	SW	.....	.....	3	.....	10	.....	.....	0.067	1.7	Raining.....	Physical Society.
Friedrichshafen	26.65	727.6	30.13	765.3	40.3	4.6	81	WNW	.....	.....	2	.....	9	.....	.....	0.102	2.6	Rain, graupel	M. Wilhelm.
Hamburg	.....	.....	29.74	755.3	44.2	6.8	94	SSW	.....	.....	5	.....	10	.....	.....	0.110	2.8	Showery.....	Captain F. Hegemann.
Kiel	.....	.....	29.66	753.4	44.4	6.9	96	SW	.....	.....	3	.....	10	.....	.....	0.157	4.0	.....	Prof. G. Karsten
Königsberg, (Prussia)	.....	.....	30.03	762.7	32.0	0.0	85	SW	.....	.....	2	.....	9	.....	.....	0.012	0.3	Snowing.....	Prof. E. Luther.
Köslin	.....	.....	29.91	759.7	37.4	3.0	.....	SE	.....	.....	4	.....	10	.....	.....	0	0	.....	H. Müller.
Leipsic	.....	.....	29.95	760.6	45.7	7.6	88	SSW	.....	.....	3	.....	10	.....	.....	Inap.	Inap.	.....	Prof. Bruhns.
Memel	.....	.....	29.98	761.6	34.5	1.4	91	WSW	.....	.....	3	.....	10ks	.....	.....	0.028	0.7	.....	Reinbrecht & Skalweit.
Münster	.....	.....	29.71	754.6	47.3	8.5	93	SW	.....	.....	3	.....	10	.....	.....	0.118	3.0	.....	Prof. E. Heis.
Neufahrwasser	.....	.....	29.98	761.4	35.8	2.1	80	SSW	.....	.....	3	.....	4	SW	.....	0	0	.....	A Lothe.
Posen	.....	.....	29.98	761.6	46.6	8.1	64	WSW	.....	.....	2	.....	1	.....	.....	0	0	.....	Dr. Magener.
Strassburg, (in Alsace)	.....	.....	30.01	762.3	46 9	8.3	63	SW	.....	.....	3	.....	10	.....	.....	0	0	.....	Dr. Schur.
Stuttgart	.....	.....	29.99	761.7	45.1	7.3	70	S	.....	.....	2	.....	10	.....	.....	0.031	0.8	.....	Prof. Schoder.
Thorn	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Dr. Hasenbalg.
Treves, (Trier)	.....	.....	29.79	756.7	44.6	7.0	84	SW	.....	.....	7	.....	10	.....	.....	0.315	8.0	.....	Prof. Flesch.
Weissenburg, (Bavaria)	28.47	723.1	30.00	762.1	43.3	6.3	58	S	.....	.....	4	.....	1	.....	.....	0	0	.....	Dr. von Bebber.
Wustrow, Naval School	.....	.....	29.82	757.4	41.7	5.4	92	SSE	.....	.....	4	.....	10	.....	.....	0.299	7.6	.....	E. F. Schütz.
GERMAN NAVAL SERIES.																			
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—The elevation of Friedrichshafen is 413.4 meters, or 1,356.3 feet; Weissenburg, 481 meters, or 1,414.0 ft. In the originals the distinction between the amount of upper and lower clouds is not made. It is not always certain that the remarks in the weather column refer to the moment of observation.

GREEK SERIES.

Furnished by the coöperation of Professor Dr. J. F. Julius Schmidt, Director of the Royal Observatory at Athens.

STATIONS.	Barometer: Corrected for instrum'tal error and temperature. Inches.	Barometer: Corrected for instrum'tal error and temperature. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall, or melted snow in the past 24 hours. Inches.	Rain-fall, or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Athens	.....	.....	30.01	762.2	61.7	16 5	.....	S	.....	.....	Strong	.....	.....	.....	.....	.....	.....	Clear.	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

NOTE.—The originals give the barometer corrected, but not reduced to sea-level; occasionally the kind of clouds; the weather as published. They omit the humidity wind-force, amount of cloudiness and rain-fall.

INDIAN SERIES.

Furnished by the coöperation of H. F. Blanford, Meteorological Reporter to the Government of India.

Kurrachee	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Deesa	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Bombay	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Poona	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Lahore	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Belgaum	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Bangalore	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Rorkee	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Agra	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Trichinopoly	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Nagpur	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Madras	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Lucknow	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Allahabad	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Patna	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Hazaribagh	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Cuttack	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Calcutta (Alipore)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Goalpara	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Chittagong	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Sibsagar	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Rangoon	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Jubbulpore	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
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.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

ITALIAN SERIES.

Furnished by the cooperation of His Excellency the Minister of Agriculture, Industry and Commerce, and the respective Observers.

Udine	.....	.....	30.11	764.8	47.8	8.8	39	SE	1.3	0.6	.....	.....	0	.....	.....	0	0	.....	Prof. Giovanni Cloddg.
Stelvio	22.05	560.1	.....	.....	19.4	— 7.0	.....	W	0.7	0.3	.....	.....	8	SE	.....	0	0	.....	Signora Ernesta Manfredi.
Valdobbia	22.12	561.7	.....	.....	23.7	— 4.7	70	WNW	.....	.....	2	.....	10	.....	.....	0	0	.....	Ab. Dom. Mengini.
Padua	.....	.....	30.11	764.9	47.3	8.6	69	SE	2.7	1.1	.....	.....	3	.....	.....	0	0	.....	Prof. Dott. Lor nzoni.
Vicenza	.....	.....	30.12	765.0	48.4	9.1	68	S	1.3	0.6	.....	.....	2	W	.....	0	0	.....	Conte Alm. Da Schio.
Verona	.....	.....	30.13	765.3	50.2	10.1	73	E	.....	.....	6	.....	0	.....	.....	0	0	.....	Dott. B. Bertoncelli.
Bergamo	28.74	730.0	30.09	764.2	47.1	8.4	58	SE	.....	.....	2	.....	3	.....	.....	0	0	.....	Prof Trionfini Carlo.
Domodossola	.....	.....	30.09	764.3	48.2	9.0	38	S	.....	.....	6	.....	10	.....	.....	0	0	.....	P of. Giuseppe Cuzza.
Milan	.....	.....	30.11	764.7	51.1	10.6	69	SE	.....	.....	2	.....	3	ESE	.....	0	0	.....	Ab. Gio. Capelli
Pavia	.....	.....	30.11	764.8	48.2	9.0	66	E	.....	.....	1	.....	9	.....	.....	0	0	.....	Pr . Gio. Cantoni.
Moncalieri	.....	.....	30.12	765.1	48.4	8.0	66	SE	0	0	.....	.....	7	N	.....	0	0	.....	Pro P. F. Denza.
Mondovi	28.16	715.2	30.10	764.6	46.0	7.8	34	NNW	.....	.....	2	.....	0	.....	.....	0	0	.....	Prof. F. C. Bruno.
Porto Maurizio	.....	.....	30.14	765.6	54.0	12.2	50	E	.....	.....	2	.....	8	.....	.....	0	0	.....	Prof. ... Vassallo.
Genoa	.....	.....	30.11	764.7	54.9	12.7	50	SE	6.3	2.8	.....	.....	10	SE	.....	0	0	.....	Prof. G M Garibaldi.
Piacenza	.....	.....	30.12	765.0	47.0	8.4	62	E	2.5	1.1	.....	.....	10	.....	.....	0	0	.....	Dott. G. anzi.
Parma	.....	.....	30.17	76 .2	51.8	10.7	59	E	.....	.....	2	.....	2	.....	.....	0	0	.....	Prof. P. Pigorini.
Florence	.....	.....	30.11	764.9	51.8	11.0	44	N	.....	.....	4	.....	1	.....	.....	0	0	.....	Cav. F. Meucci.
Leghorn	.....	.....	30.11	764.8	53.8	12.1	30	ENE	6.9	3.1	.....	.....	3	NW	.....	0	0	.....	Prof. P. Monte.
Siena	28.85	732.8	30.07	763.6	49.4	9.8	36	ENE	1.3	0.6	.....	.....	1	W	.....	0	0	.....	Prof. L. Toscani.
Urbino	28.53	724.7	30.12	765.1	43.1	6.2	66	NE	.....	.....	1	.....	7	.....	.....	0.340	8.8	Raining	Prof. P. Serpieri.
Pesaro	.....	.....	30.15	765.8	46.9	8.3	79	NW	26.2	11.7	.....	.....	1	NW	.....	0.	0	.....	Prof. Luigi Guidi.
Ancona	.....	.....	30.12	765.1	50.7	10.4	58	NW	.....	.....	4	.....	0?	.....	.....	0.026	0.7	Light rain?	Prof. F. De— Bosis.
Grosseto	.....	.....	30.11	764.7	53.8	12.1	42	N	.....	.....	4	.....	2	SE	.....	0.	0	.....	Avv. P. Ponticelli.
Rome	.....	.....	30.07	763.6	55.9	13.3	44	W	3.8	1.7	.....	.....	1	SE	.....	0.	0	.....	Profs. P. Secchi & L. Respighi
Naples, O. U.	.....	.....	30.07	763.7	57.1	14.0	94	NE	.....	.....	2	.....	6	ENE	.....	0.093	1.5	Raining	Prof. L. Palmieri.
Lecce	.....	.....	30.06	764.0	52.5	11.4	64	NE	5.6	2.5	.....	.....	6	.....	.....	0.	0	.....	Prof. C. De—Giorgi.
Cosenza	.....	.....	30.05	763.3	54.1	12.3	57	WNW	6.5	2.8	.....	.....	1	.....	.....	0.	0	.....	Prof. F. D. Conti.
Cagliari	.....	.....	30.04	763.0	57.7	14.3	38	SW	.....	.....	2	.....	1	E	.....	0.	0	.....	Prof. A. Pacinotti.
Ustposto, (Sicily)	.....	.....	29.96	760.9	56.8	13.8	69	E	.....	.....	4	.....	10	S	.....	0.	0	.....	Prof. F. Cuffero.
Palermo	.....	.....	29.97	761.2	56.8	13.8	57	NE	3.1	1.4	.....	.....	7	.....	.....	0.	0	.....	Prof. G. Cacciatore.
Caltanissetta	27.99	711.0	29.98	761.4	50.6	10.0	50	E	.....	.....	6	.....	4	S	.....	0.	0	.....	Prof. A. Pagani.
Siracusa	.....	.....	30.00	761.9	57.9	14.4	67	ENE	.....	.....	6	.....	10	ENE	.....	0.	0	.....	Prof. V. Giuliano.
Sub-Series.																			
Naples, S. R.	.....	.....	30.09	764.3	52.5	11.4	49	NE	2.7	1.1	.....	.....	3	NW	.....	0.07.	1.9	.....	Prof. F. Brioschi
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

NOTE.—The originals give the wind-force by the scale 0 to 4, or the velocity in kilometers per hour; generally, no distinction between upper and lower clouds occasionally the weather by the Vienna symbols. The elevation of Stelvio is 2,543.0 meters, or 8,342.9 feet; Valdobbia, 2,548.0 meters or 8,359.3 feet; Bergamo, 379.6 meters, or 1,24 3 feet; Mondovi, 556 meters, or 1,824.2 feet; Siena, 348.5 meters, or 1,143.3 feet; Urbino, 451 meters, or 1,479.7 feet; Caltanissetta, 570.3 meters, or 1,871.0 feet.

JAPANESE SERIES.

Furnished by the coöperation of the Imperial University of Tokei, Japan.

Tokei	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Prof. P. V. Veeder.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

NOTE.—The originals give the amount of cloudiness by the scale 0 to 4 without distinguishing between upper and lower clouds. The rain-fal. is measured at 7 a. m., cal time.

By authority of the SECRETARY OF PUBLIC WORKS.

MEXICAN SERIES.

Furnished by the coöperation of Senor Mariano Barcena, Director of the Central Meteorological Observatory in the City of Mexico.

STATIONS.	Barometer: Corrected for instrum'tal error and temperature. Inches.	Barometer: Corrected for instrum'tal error and temperature. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Mexico																			Mariano Barcena.
																			Vicente Reyes.
																			Miguel Perez.

NOTE.—The elevation of Mexico is 2,290 meters, or 7,512.9 feet. The rain-fall is measured at 6 a. m., local time. (Engineers in charge.)

NETHERLANDS' SERIES.

Furnished by the cooperation of Professor Buys Ballot, Director of the Royal Meteorological Institute of the Netherlands at Utrecht.

Flushing			29.85	758.3	45.0	7.2		NW			3					0.102	2.6		
Groningen			29.67	753.7	43.7	6.5										0.354	9.0		
Helder			29.73	755.2	44.6	7.0		W			4					0.236	6.0		
Utrecht			29.75	755.6	43.7	6.5	92	WNW			3		8			0.492	12.5	Very cloudy	

NOTE.—The originals give the wind-pressure in kilograms per square meter; for Utrecht, they give the weather as published, from which the amount of cloudiness is taken by the scale 0 to 4, without distinguishing between upper and lower clouds. It is assumed that the barometer readings have been reduced to sea-level.

NORWEGIAN SERIES.

Furnished by the cooperation of Professor H. Mohn, Director of the Royal Norwegian Meteorological Institute at Christiania.

Bergen			29.52	749.7	34.2	1.2	96	SSE	9.6	4.3			10			0.087	2.2		
Brönö			29.46	748.3	35.6	2.0	64	S	17 9	8			8			0	0		
Christiania			29.72	754.8	20.5	— 6.4	87	NE	8.7	3.9			10			0.016	0.4		
Tromsö			29.24	742.8	32.4	0.2	67	SSW	26.8	12			10			0.079	2.0		

NOTE.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols. The cloudiness and weather at Bergen refer to 2h., p. m., local time, instead of 1h., 4 min.

PORTUGUESE SERIES.

Furnished by the coöperation of J. C. de Brito Capello, Director of the Meteorological Observatory of the Infante Don Luiz at Lisbon.

Angra, (Azores)			30.43	772.9	58.3	14.6	80	E	21.0	9.4			6	W		0	0		Dr. J. A. Sampaio.
Campo Major			30.26	768.7	55.2	12.9	64	WNW	14.3	6.4			6	SW		0	0		Dr. A. M. R. dos Santos.
Funchal, (Madeira)			30.32	770.0	63.9	17.7	65	SW	3.8	1.7			5			0	0		Capt. D. A. de Cunha.
Lisbon			30.36	771.2	58.6	14.8	65	N	22.4	10.0			4			0	0		The Observatory.
Ponta Delgada, (Azores)			30.43	772.8	59.7	15.4	64	E	8.7	3.9			3			0.059	1.5		

NOTE.—The originals give the wind-velocity in kilometers per hour; occasionally, the weather by the Vienna symbols; the amount of cloudiness without distinguishing between upper and lower clouds; the barometer corrected but not reduced to sea-level. The rain-fall at Libson is measured at noon, instead of 0 h. 6 m., p. m.

RUSSIAN SERIES.

Furnished by the cooperation of Professor H. Wild, Director of the Imperial Central Physical Observatory of Russia, at St. Petersburg.

Warsaw			30.06	763.4	36.3	2.4	80	SW	4	2			1						Astronomical Obs.
Wilna			30.03	762.8	35.6	2.0	85	Calm	0	0			10					Raining	Astronomical Obs.
Dorpat			29.93	760.2	30.7	— 0.7	93	SE	4	2			10						Physical Cabinet.
St. Petersburg			29.99	761.7	17.8	— 7.9	92	SE	13	6			10					Light snow	Central Physical Obs.
Kuopio			29.93	760.2	9.7	—12.4	100	SE	13	6			10					Snowing	Ch. Forsten.
Kieff			30.23	767.8	28.0	— 2.2	79	SSE	7	3			9						Physical Cabinet.
Nikolaiev			30.26	768.6	29.3	— 1.5	74	SE	7	3			8						Kurdakof.
Kertch			30.28	769.1	30.7	— 0.7	79	E	13	6			2						Lagorio.
Moscow			30.37	771.3	20.5	— 6.4	87	SE	7	3			8						Meteorological Obs.
Lugan			30.40	772.1	19.4	— 7.0	65	Calm	0	0			9						Meteorological Obs.
Archangel			30.15	765.9	8.2	—13.2	66	S	13	6			0						Ogorodnikof.
Tiflis	28.80	731.5	30.26	768.7	42.6	5.9	55	SE	4	2			0						Physical Observatory.
Astrakhan			30.44	773 1	18 7	— 7.4	72	N	4	2			10			Blank	Blank		Sebastianof.
Kasan			30.52	775.2	7.0	—13.9	71	WSW	9	4			0						Physical Cabinet.
Orenburg			30.40	772.2	28.2	— 2.1	90	E	13	6			3						Tschernischei.
Ekaterinburg	29.10	739.0	30.13	765.4	6.3	—14.3	70	WSW	11	5			2						Meteorogical Obs.
Nukuss			30.06	763.4	27.7	— 2.4	94	NW	4	2			10						
Kasaly																			Bobrof.
Tashkend	28.38	720.9	30.13	765.3	43.9	6.6	91	S	13	6			10					Raining	Michelson.
Barnaul			29.95	760.6	— 9.9	—23.3	79	W	4	2			9						Meteorological Obs.
Yeniseisk			29.54	750.3	— 2.4	—19.1	69	SW	4	2			3						Marks.
Irkutsk																			Usolzef.
Peking, (China)			30.19	766.7	30.7	— 0.7	71	Calm	0	0			0						Physical Observatory.
Nertchinsk																			Meteorological Obs.
Vladivostock																			
Nikolaievsk, on the Amoor																			

NOTE.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols; they omit the rain-fall. The elevation of Tiflis is 409 meters, or 1,341.8 feet; Ekaterinburg, 306.4? m., or 1,005.2? ft.; Tashkend, 494.2? m., or 1,621.3? ft.; Irkutsk, 392 m., or 1,286 ft.; Nertchinsk, 592.0? m., or 1,942.2? ft.

SPANISH SERIES.

Furnished by the coöperation of Antonio Aguilar, Director of the Royal Observatory at Madrid, and of Don Cecilio Pujazon, Captain R. N. Director of the Naval Observatory at San Fernando.

Madrid			30.14	765.6	57.9	14.4	42	W	12.7	5.67		0	9			0	0	Almost cov'd	Royal Observatory.
San Fernando			30.33	770.3	62.1	16.7	67	SW	5.8	2.6		4	4	SW	SW	0	0		Naval Observatory.

NOTE.—The originals give the weather in general terms, as published; rain-fall for San Fernando from preceding to following midnight; wind-velocity for Madrid in kilometers per hour.

SWEDISH SERIES.

Furnished by the coöperation of Professor R. Rubenson, Director of the Royal Swedish Meteorological Institute, at Stockholm; and of Dr. H. H. Hildebrandsson, Chief of the Meteorological Division of the Upsala Observatory.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Upper. 0—10.	Clouds. Amount. Lower. 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Haparanda			29.87	758.8	8.6	—13.0	92	SE.			2		10			0.	0.		
Umea																			
Hernosand			29.82	757.8	14.2	— 9.9	97	S.			4		10			0.063	1.6		
Stockholm			29.85	758.1	24.1	— 4.4	86	NNE.			2		10+			0	0		
Wisby			29.89	759.3	32.0	0.0	96	SE.			4		10			0.008	0.2		
Sub-Series.																			
Upsala			29.91	759.8	9.9	—12.3	87	ESE	1.8	0.8			10		S	0.199	5.05		Dr. Hildebrandsson.

Note.—The originals give the wind-force by the scale 0 to 6, and Upsala also velocity in meters per second; occasionally, the weather by the Vienna symbols, or in general terms; no distinction between the amount of upper and lower clouds. The rain-fall is measured at 8 a. m., local time.

SWISS SERIES.

Furnished by the coöperation of Professor R. Wolf, Director of the Observatory at Zurich; and of Professor E. Plantamour, Director of the Observatory at Geneva.

Geneva	28.61	726.8	30.07	763.8	43.7	6.5	59	WNW.			1	5				0	0	Vapory	The Observatory.
Zurich	28.40	721.3	30.07	763.8	43.9	6.6	64	SW.			1	9				0.173	4.4	Covered	The Observatory.

Note.—For Geneva the corresponding departures from the normal values are: Barometer, +0.8 mm; Thermometer, +2.4 cent.; Relative Humidity, —11 per cent.

Note.—The rain-fall is measured at Zurich at 7 a. m. on the following day. The originals give the barometer corrected but not reduced to sea-level; the wind-force by the scale 0 to 4 for Zurich; the amount of cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The elevation of Geneva is 408 meters, or 1,339 feet, and that of Zurich 470 meters, or 1,542 feet.

TURKISH SERIES.

Furnished by the cooperation of A. Coumbary, Effendi, Director of the Central Observatory at Constantinople, and of Professor C. V. A. Van Dyck, Superintendent of the Lee Observatory at Beirut.

Constantinople																			
Fao, (Persian Gulf)																			
Salonica																			
Valona																			
Varna																			
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y			30.26	768.7	64.9	18.3	52	W			2		1k		SE	0	0	*D. clouds	Prof. C. V. A. Van Dyck.

Note.—The originals give the wind-force by the scale 0 to 7, (except Beirut, by the scale 0 to 12, and Constantinople velocity in meters per second;) the weather in general terms, as published; no distinction between upper and lower clouds, and, except Constantinople and Beirut, the amount, by the scale 0 to 4. It is assumed that the barometer is reduced to sea-level. *Detached clouds.

CANADIAN SERIES.

Furnished by the cooperation of Professor G. T. Kingston, Director of the Magnetic Observatory at Toronto, and Superintendent of the Meteorological Office of the Dominion of Canada, and the respective Observers. Those marked with a star (*) are also telegraphed daily to the office of the Chief Signal Officer, U. S. Army.

Bathurst, N. B.			29.40	746.7	10.6	—11.9	69	Calm	0	0			10						Hon. J. Ferguson.
Brockville, Ontario			29.84	757.9	6	—14.4		N.	5	2.2		0	2s		N	0	0	Fair	W. R. Bigg.
*Chatham, N. B.			29.40	746.7	6	—14.4	100	Calm	0	0		5ck	Haze	W		0.53	13.5	Hazy	G. A. Blair.
Charlottetown, P. E. Island			29.48	748.8	15	— 9.4	91	W	5	2.2			8ks			0.050	1.27	Cloudy	H. J. Cundall, C. E.
Cornwall, Ontario			29.76	755.9	3.9	—15.6	67	W.			1	0	0			0	0	Bright	James Smith, M. A.
Dalhousie, N. B.			29.41	747.0	11.0	—11.7	100	W.			1					0.30	7.6	Snowing	H. A. Johnson.
Esquimault, B. C.			29.77	756.1	49.3	9.6	100	SW.					10s			0.53	13.5	Cloudy	W. H. Bevis.
*Father Point, Quebec			29.33	745.0	17	— 8.3	92	S.	1	0.4			10n			0.07	1.8	Clearing	J. McWilliams.
Fredericton, N. B.			29.52	749.8	0.1	—17.7	100	Calm	0	0			10s			0.150	3.81	Cloudy	Prof. Harrison.
*Fort Garry, Manitoba			30.39	771.9	12	—11.1	94	S.	5	2.2		0+	2s		S	0	0	Fair	James Stewart.
Goderich, Ontario			30.05	763.3	9.1	—12.7	82	N.			2	0+	2s			0	0	Clear	H. J. Strang, M. A.
Granton, Ontario	28.77	730.7	29.98	761.5	7.6	—13.6		NE.			1	0+	0+			0	0	Clear	James Grant.
*Halifax, N. S.			29.52	749.8	16	— 8.9	82	W.	4	1.8		0+	5ks		W	0.01	0.25	Fair	F. Allison, M. A.
Hamilton, Ontario			29.96	761.0	10.2	—12.1	62	W.			1	2c.	0+			0.20	5.1	Clear	G. Dickson.
Heart's Content, N. F.			29.66	753.4	30	— 1.1	100	SW.			3		10			0.75	19.1	Overcast	E. Weedon.
*Kingston, Ontario			29.88	758.9	8	—13.3	75	Calm	0	0		0+	0+			0	0	Clear	S. Woods, M. A.
*Montreal, Quebec			29.70	754.4	6	—14.4	78	NW.	15	6.7		0+	2ks			Inap.	Inap	Clear	C. H. McLeod, C. E.
*Ottawa, Ontario			29.74	755.4	7	—13.9	79	W.	10	4.5		2cs	0+	W.		0+	0	Clear	J. B. Haney.
*Parry Sound, Ontario			30.03	762.7	5	—15.0	62	N.	18	8.0		0+	0+			0.02	0.5	Clear	Rev. R. Mosley.
Port Dover, Ontario			29.89	759.2	13	—10.6	81	NE.	16	7.2		8ck	0+	NW.		0.40	11.7	Fair	H. Morgan.
Port Hastings, N. S.			29.55	750.6	33.8	1.0		Calm								0	0	Fine	Peter Grant.
Port Stanley, Ontario			29.91	759.7	16	— 8.9	76	N.	8	3.6		5k	0+	W.		0.06	1.5	Cloudy	M. Payne.
*Quebec, Quebec			29.53	750.0	11	—11.7	80	S.	4	1.8			10n		S.	0	0	Cloudy	Capt. Ashe, R. N.
*Rockliffe, Ontario			29.95	760.7	2	—16.7	91	W.	14	6.3		0+	0+			0	0	Clear	
St. John, N. B.			29.55	750.6	11	—11.7	80	Calm.	0	0		9ks?	0+			0.08	2.0	Cloudy	G. Murdoch, C. E.
*Sangeen, Ontario			30.04	763.0	59	15.0	67	Calm	0	0		0	0			0.35	8.9	Clear	K. Stewart.
Stayner, Ontario			30.01	762.2	8	—13.3	75	NW.	15	6.7		0+	0+			0.15	3.8	Clear	R. J. Cole.
Stratford, Ontario	28.58	725.9	29.99	761.7	5.0	—14.7	76	NE.	4	1.8		0	0			0.35	8.9	Fine	C. J. MacGregor, M. A.
*Sydney, C. B.			29.50	749.3	25	— 3.9	81	S.	6	2.7			8ks		SW.	0.11	2.8	Clearing	T. C. Hill.
*Toronto, Ontario			29.91	759.7	8	—13.3	86	N.	2	0.9		0+	0+			0.25	6.3	Clear	Magnetic Observatory.
Woodstock, Ontario			29.95	760.7	7.7	—13.5	64	N	12	5.4		0	1s			0	0	Clear	J. Montgomery.
Sub-Series.																			
St. Johns, Newfoundland			29.71	754.6	32.0	0.0	100	SW				5k	10s			0.28	7.1	Fair	John Delany.

Note.—The originals for Brockville, Charlottetown, Port Dover, Port Stanley, Stayner, St. Johns, N. F. and those telegraphed, give the amount of cloudiness by the scale 0 to 4. The elevation of Granton is 1,015 feet, or 309.4 m.; Stratford, 1,182 feet, or 360.3 m.

UNITED STATES SERIES.

Furnished by the cooperation of Bvt. Brig. Gen. Albert J. Myer, Chief Signal Officer, U. S. Army.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather	Observer.
Albany, N. Y.			29.66	753.4	18	— 7.8	84.	Calm.	0.	0.		9clk	0			Inap.	Inap.	Fair	
Alpena, Mich			30.15	765.8	16	— 8.9	66.	N.	12.	5.4		0.	0			0.99	9.9	Clear	
Atlantic City, N. J.			29.65	753.1	37	2.8	80	S.	4.	1.8			10s.		SW	Inap.	Inap.	Cloudy	
Augusta, Ga			29.98	761.5	43	6.1	75.	SW.	2.	0.9		0.	0.			0	0	Clear	
Baltimore, Md			29.66	753.4	36	2.2	80.	NE.	4.	1.8			10s.			0	0	Cloudy	
Barnegat, N. J.			29.67	753.6	34	1.1	80.	NE.	5.	2.2		10cs.	0.	W.		0	0	Cloudy	
Bismarck, Dakota	28.29	718.6	30.28	769.1	22	— 5.6	70.	Calm.	0.	0.		0.	0.			0	0	Clear	
Boston, Mass			29.61	752.1	20	— 6.7	70.	SW.	3.	1.3		4cs.	Sm'e	W.		0	0.	Fair	
Breckenridge, Minn			30.38	771.6	21	— 6.1	85.	N.	4.	1.8		0.	5ks.			0	0.	Fair	
Buffalo, N. Y			29.80	756.9	18.0	— 7.8	84	NE	6	2.7		2c	2s	SW	SW	0.26	6.6	Fair	
Burlington, Vt			29.70	754.4	10	—12.2	79	N.	7.	3.1			8s.			0	0	Cloudy	
Cairo, Ill			29.86	758.9	51	10.6	59	NW.	12	5.4		8k	0.	NW.		0	0.	Fair	
Cape Hatteras, N. C.			29.77	756.1	51	10.6	65	SW.	26.	11.6		2c	Sm'e			0	0.	Fair	
Cape Henry, Va			29.72	754.9	41	5.0	49	SW	17.	7.6		0	0			0	0.	Clear	
Cape Lookout, N. C.			29.86	758.4	50	10.0	78.	W.	24	10.7		5c	2s.	W.		0	0.	Fair	
Cape May, N. J.			29.66	753.4	38	3.3	80.	S.	2	0.9			10s		SW	0	0	Cloudy	
Charleston, S. C.			30.00	762.0	47	8.3	62	SW.	10.	4.5		0	Haze			0	0.	Clear	
Cheyenne, Wyoming	24.20	614.7	30.14	765.5	23	— 5.0	60.	NW.	8.	3.6		0.	0			0	0.	Clear	
Chicago, Ill			29.99	761.7	32	0.0	79	N	22	9.8		0	8s		NE	0	0.	Clearing	
Cincinnati, Ohio			29.66	753.4	45	7.2	69.	NW.	6.	2.7		8cs,ck	Sm'e	W.		0	0	Cloudy	
Cleveland, Ohio			29.84	757.9	24	— 4.4	87.	N.	20	8.9			10n.		N	0.01	0.3.	Light snow	
Corsicana, Tex			30.13	765.3.	54	12.2	86.	S.	6.	2.7			10s.			0	0	Cloudy	
Davenport, Iowa			30.13	765.3	34	1.1	69.	NE.	16.	7.2			10s		NE.	0	0.	Cloudy	
Denison, Tex			30.08	764.0	50	10.0	86.	SW	8	3.6		1c	0.	SW		0	0.	Clear	
Denver, Col	24.99	634.7	30.21	767.3	30	— 1.1	59.	S.	5	2.2		0.	0.			0	0.	Clear	
Detroit, Mich			29.92	760.0	22	— 5.6	72.	N.	15.	6.7		0	0.			0	0	Clear	
Dodge City, Kan	27.57	700.3	29.96	761.0	33	0.6	89.	N.	12	5.4		0	0.			0.02	0.5.	Clear	
Dubuque, Iowa			30.15	765.8	34	1.1	69.	NE.	15.	6.7		0	0.			0	0	Clear	
Duluth, Minn			30.37	771.4	33	0.6	79.	NE.	18	8.0.		10k	0.	NE.		0	0.	Cloudy	
Eastport, Me			29.48	748.8	17	— 8.3	83	W.	9	4.0.			10s		NE	0.04	1.0.	Cloudy	
Erie, Pa			29.80	756.9	20	— 6.7	85.	NE.	24	10.7.			10s.			0.03	0.8.	Cloudy	
Escanaba, Mich			30.28	769.1	12	—11.1	61.	N	12	5.4		4ck	4s			0.06	1.5.	Fair	
Fort Gibson, Indian Ter			30.01	762.2	41	5.0	83.	Calm	0.	0.		0.	0.			0.20	5.1	Clear	
Ft. St. Michael, Alaska												0.	0			0	0.	Clear	
Fort Sill, Indian Ter	28.86	733.0	30.01	762.2	45	7.2	60	NW	2.	0.9.									
Fort Sully, Dakota	28.60	726.4	30.30	771.9	25	— 3.9	75.	NW	1.	0.4.		1k	0.	N		0	0	Fair	
Florence, Arizona	28.52	724.4	30.05	763.3	55	12.8		NW				0.	0.			0	0	Clear	
Galveston, Tex			30.22	767.6	57	13.9	87.	E.	2.	0.9.		0.	0.			0	0	Clear	
Grand Haven, Mich			30.05	763.3	26	— 3.3	76.	NE.	21.	9.4			10s		W	0	0.	Cloudy	
Indianapolis, Ind			29.81	757.2	36	2.2	80.	NW.	9.	4.0.		0.	0.			0	0.	Clear	
Indianola, Tex			30.21	767.3	56	13.3	93.	Calm	0.	0.			10s.		N	0	0.	Cloudy	
Jacksonville, Fla			30.14	765.5	48	8.9	70.	SW.	4.	1.8.			10s.		SW	0	0.	Cloudy	
Keokuk, Iowa			30.04	763.0	35	1.7	80.	NE.	10.	4.0.		0	0.			0	0.	Clear	
Key West, Fla			30.16	765.8	67	13.9	81	N.	8.	3.6.			10s.		NE	0	0.	Cloudy	
Kittyhawk, N. C.			29.77	756.1	42	5.6	65.	W.	16.	7.2		0.	0.			2	0.	Clear	
Knoxville, Tenn			29.87	758.7	44	6.7	44.	S.	4.	1.8.		2c	0.	W.		0.	0.	Clear	
La Crosse, Wis			30.22	767.6	33	0.6	69.	N.	15.	6.7		6ck	0			0	0.	Cloudy	
Leavenworth, Kan			30.12	765.0	34	1.1	80.	N.	11	4.9		0.	0.			0	0.	Clear	
Louisville, Ky			29.70	755.9	47	8.3	62	W.	15.	6.7		0.	0.			0	0.	Clear	
Lynchburg, Va			29.68	753 9	40	4.4	48.	W.	2	0.9		5c	Haz	W.		0.	0	Fair	
Malone, N. Y			29.69	754.1	5	—15.0	76	W.	9.	4.0		0.	0			0.	0.	Clear	
Marquette, Mich			30.26	768.6	24	— 4.4	61	N.	6.	2.7		0.	0			0.	0	Clear	
Memphis, Tenn			29.96	761.0	51	10.6	59.	SW	10.	4.5		0	0			0.05	1.3	Clear	
Milwaukee, Wis			30.14	765.5	28	— 2.2	77.	NE.	20.	8.9		1c	Sm'e	SW.		0	0.	Clear	
Mobile Ala			30.16	766.1	46.	7.8	76	S.	1.	0.4.		0	2s			0	0	Clear	
Montgomery, Ala			30.10	764.5	44	6.7	75.	SW	7	3.1		2k	2s	W		0	0	Fair	
Morgantown, W. Va	28.53	724.6	29.56	750.8	45	7.2	68.	SW	14.	6.3.		2c	Haz.	W		0	0	Fair	
Mt. Washington, N. H	22.83	579.9	29.19	741.4	—11	—23.9	100	NW	90.	40.2.			10s		SW	0	0	Threatening	
Nashville, Tenn			29.85	758.2	50	10.0	64	W	6.	2.7			Fog			0	0	Foggy	
New Haven, Conn			29.65	753.1	30	— 1.1	68	Calm	0.	0.		5k	0	W		0	0	Fair	
New London, Conn			29.67	753.6	27	— 2.8	66	Calm	0.	0.			10s, fg			0	0	Cloudy	
New Orleans, La			30.18	766.6	49.6	9.7	71	W	3.	1.3.		2ck	hos,sm'	W	W	0	0	Cloudy	
Newport, R. I			29.65	753.1	27	— 2.8	77	W	12	5.4		0	Sm'e		W	0	0	Clear	
New York, N. Y			29.69	754.1	34	1.1	79.	N	4.	1.8.			10s		W	0	0	Threatening	
Norfolk, Va			29.74	755.4	40	4.4	56	SW	8.	3.6.			10s, fg			Inap.	Inap.	Threatening	
North Platte, Neb	27.22	691.4	29.94	760.5	25	— 3.9	83	W	9.	4.0		0	Haz.			0	0	Clear	
Omaha, Neb	29.05	737.9	30.18	766.6	31	— 0.6	79.	N	13	5.8		0	0			0	0	Clear	
Oswego, N. Y			29.80	756.9	17	— 8.3	83	N	12	5.4		0	8s		N	0	0	Cloudy	
Pembina, Dakota			30.41	772.4	9	—12.8	78	Calm	0.	0.		Haz.	1ks			0	0	Clear	
Philadelphia, Pa			29.68	753.9	33	0.6	89	E.	3	1.3		0	0			0	0	Clear	
Pike's Peak, Col	17.79	451.8	30.06	762.9	10	—12.2	48	NE	14.	6.3.			10s			0	0	Cloudy	
Pittsburgh, Pa			29.59	751.6	37	2.8	62	NE	4	1.8		0.	0			0	0	Clear	
Port Huron, Mich			29.94	760.5	19	— 7.2	54	N.	28	12.5			10s		NE	Inap.	Inap.	Cloudy	
Portland, Me			29.55	750.6	18	— 7.8	68	W	4	1.8		1cs	0			0.05	0.5	Clear	
Portland, Oregon			29.88	758.9	49	9.4	92	N	4.	1.8.		2c	Haz			Inap.	Inap.	Fair	
Punta Rassa, Fla			30.22	767.6	55.0	12.8	57	N	8	3.6.			10n			0.08	2.0	Light rain	
Rochester, N. Y			29.79	756.7	18.5	— 7.5	76	N	7	3.1		8ck	0	SW		0	0	Fair	
Salt Lake City, Utah	25.80	657.6	30.22	767.6	28	— 2.2	77	NW	4	1.8		5c	0	NW		0.06	1.5	Fair	
Sandy Hook, N. J			29.69	754.1	36	2.2	80	SW	10	4.5.		0	0			0	0	Clear	
San Diego, Cal			30.19	766.8	53	11.7	100	NE	4	1.8			10n		SW	0.01	0.3	Light snow	
San Francisco, Cal			30.20	767.1	54	12.2	90	SW	4	1.8		0	Fog			0	0	Foggy	
Santa Fé, N. M	23.30	594.1	29.93	760.2	28	— 2.2	67	N	3	1.3			10s			0	0	Cloudy	
Savannah, Ga			30.04	763.0	47	8.3	93	SW	10	4.5		0	0			0	0	Clear	
Shreveport, La			30.17	766 3	51	10.6	79	SW	4	1.8		0	Sm'e			0	0	Clear	
Smithville, N. C			29.91	759.7	48	8.9	85	W	10.	4.5.		10cs	0	S.		0	0	Cloudy	
Springfield, Mass			29.66	753.4	23	— 5.0	58	S	2	0.9		2c	0	W.		0	0	Fair	
St. Louis, Mo			29.97	761.2	38	3.3	72	N	12	5.4		0	0			0	0	Clear	
St. Marks, Fla			30.16	766.1	43	6.1	91	NW	1	0.4		0	0			0	0	Clear	
St. Paul, Minn			30.25	768.3	32	0.0	79	N	8	3.6		5k	0	NW		0	0	Fair	
St. Paul's Island, Alaska													10s			0	0	Cloudy	
Thatcher's Island, Mass			29.66	761.8	25	— 3.9	80	NW	12	5.4									
Toledo, Ohio			29.88	758.9	28	— 2.2	67	N	16	7.2		2cs	0	NW		0	0	Fair	
Tucson, Arizona	27.09	703.3	30.24	768.1	37	2.8		S				0.	8ks		N.	Inap.	Inap.	Clearing	
Tybee Island, Ga			30.02	762.5	42	5.6	83	SW	8	3.3		0	0			0	0	Clear	
Vicksburg, Miss			30.19	766.8	50	10.0	82	SW	6	2.7		0	Sm'e			0	0	Clear	
Virginia City, M. T	24.44	620.8	29.92	760.0	19	— 7.2	61	Calm	0	0		10k	3s,sm'	SW	SW	0	0	Cloudy	
Washington, D. C			29.66	753.4	35	1.7	61	N	8	3.6		0	0			0	0	Clear	
Wilmington, N. C			29.88	758.9	47	8.3	55	SW	10.	4.5			10s,sm		W,N	0	0	Cloudy	
												5cs	0	W		0	0	Fair	

UNITED STATES SERIES.—CONTINUED.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Upper. 0—10.	Clouds. Amount. Low'r. 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Wood's Holl, Mass.	.....	.....	29.66	753.4	28	— 2.2	77	NW	10	4.5	.....	.....	10s	.....	NW	0	0	Cloudy	
Yankton, Dakota	28.99	736.3	30.35	770.9	31	— 0.6	79	NW	12	5.4	.....	.....	10s	.....	NW	0	0	Cloudy	
Yuma, Arizona	.....	.....	30.14	765.5	54	12.2	.....	E	.....	.....	.....	0	0	.....	.....	0	0	Clear	
Sub-Series.																			
Kingston, Jamaica, W. I.	.....	.....	30.24	768.1	76	24.4	76	N	6	2.7	.....	8c	2s	.....	.....	0	0	.....	James Gall.
Navassa, W. I.	.....	.....	.....	.....	75	23.9	.....	NNE	.....	.....	3	.....	.....	.....	.....	0	0	.....	Dr. G. H. Davison.
Clifton, Ja., W. I.	27.25	692.1	30.08	764.0	63	17.2	88	N	1.0	0.4	.....	2c	0	N	.....	0.60	15.2	Fine, Clear.	C. Partridge.
Paramaribo, D. Guiana, S. A.	.....	.....	30.06	763.5	78	25.6	82	E	.....	.....	2	0	4k	.....	.....	0	0	Clear	C. J. Hering.
Batavia, Dutch Guiana, S. A.	30.11	764 8	.....	.....	77.0	25	.....	ESE	.....	.....	.....	.....	.....	.....	.....	0	0	Fair	Dr. H. Groot.
Medellin, Colombia, S. A.	25.24	641.1	.....	.....	68.5	20.3	78	Calm	.....	.....	0	2s	4ks	.....	.....	0	0	Cloudy	Thomas Herran.
York Factory, B. A.	.....	.....	30.03	762.7	2 5	—16.4	86	S	2	0.9	.....	0	0	.....	.....	0	0	Clear	J. Fortescue, W. Wood
Honolulu, Oahu, H. I.	.....	.....	30.06	763.5	73	22.8	95	SSE	.....	.....	4	.....	.....	.....	.....	0	0	Cloudy	Daniel Smith.
Makawao, Maui, H. I.	.....	.....	29.86	758.4	62	16.7	88	S	.....	.....	2	0	2k	.....	.....	0	0	.....	F. L. Clarke.

NOTE.—The originals give the amount of cloudiness by the scale 0 to 4, except York Factory, Makawao, Medellin and Paramaribo. The elevation of the barometer at Bismarck is 1,677 feet, or 511.1 meters; Cheyenne, 6,057.3 ft., or 1,846.2 m.; Clifton, about 2,892 ft., or 881.5 m.; Denver, 5,135 ft., or 1,565.2 m.; Dodge City, 2486ft., or 757.6 m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Florence, 1,560 (?) ft., or 472.5 (?) m.; Makawao, 2,205 ft., or 672.1 m.; Morgantown, 1,027.9 ft., or 313.3 m.; Medellin, 4,876 ft., or 1,486.2 m.; Mt. Washington, 6,285 ft., or 1,915.6 m.; North Platte, 2,846 ft., or 867.4 m.; Omaha, 1,054.6 ft., or 321.4 m.; Pike's Peak, 14,150.7 ft., or 4,313.1 m.; Salt Lake City, 4,362.2 ft., or 1,329.6 m.; Santa Fé, 6,862.2 (?) ft., or 2,091.6 (?) m.; Tucson, 2,545 (?) ft., or 775.7 (?) m.; Virginia City, 5,480 (?) ft., or 1,670.3 (?) m.; Yankton, 1,278 ft., or 389.5 m. The following constants are added in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Denver, 5.22 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fé, 6.54 in.; Tucson, 2.59 in.; Virginia City, 5.48 in. The elevation of Batavia is about 6 feet; the barometric readings need the addition of 0.2 mm. or 0.01 in. for reduction to sea-level.

UNITED STATES NAVAL SERIES.

By authority of the **SECRETARY OF THE NAVY.**

Furnished by the coöperation of the Navy Department, through Commodore Daniel Ammen, U. S. N., Chief of Bureau of Navigation.

STATIONS AND VESSELS.	True course toward—	Hourly rate in knots.	*Barometer as reported. Inches.	*Barometer as reported. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Up'er From—	Clouds. Direction. Low'r From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	State of Ocean.	Direction of swell from—	Weather.	Observer.
Naval Academy, Annapolis, Md.	.....	.....	29.30	744.2	37	2.8	63	NNE	.....	.....	3	.....	10	.....	.....	0	0	.....	.....	Cloudy.....	
Naval Hospital, Annapolis, Md.	.....	.....	29.70	754.4	35	1.7	70	N	.....	.....	1	.....	9	.....	W	0	0	.....	.....	Threatening	
Navy Yard, Mare Island, Cal.	.....	.....	30.28	769.1	53.2	11.8	.....	NNW	.....	.....	1	.....	8	.....	.....	0	0	.....	.....	Fair.....	
Navy Yard, Norfolk, Va.	.....	.....	29.89†	759.2†	40	4.4	91	SW	5	2.2	.....	.....	1c	.....	.....	0	0	.....	.....	Hazy.....	
Navy Yard, Pensacola, Fla.	.....	.....	30.25	768.3	50.5	10.3	.....	W	.....	.....	1	.....	1	.....	E	0	0	.....	.....	‡D. clouds....	
Navy Yard, Portsmouth, N.H.	.....	.....	29.56	750.8	15	— 9.4	.....	WSW	8	3.6	.....	.....	.....	.....	N&E	0	0	.....	.....	Clear	
¶ Canonicus, New Orleans, La.	.....	.....	30.12	765.0	48	8.9	86	WSW	.....	.....	2	.....	0	.....	.....	.....	.....	.....	.....	Clear.....	
Colorado, New York, N. Y.	.....	.....	29.75	755.6	34	1.1	.....	NNW	1	0.4	.....	.....	10	.....	.....	0	0	.....	.....	Misty.....	
Essex, N. 22°, 50′, W. 02°, 55′.	.....	.....	30.13	765.3	73	22.8	95	SSE	.....	.....	2	.....	5	.....	SE	.....	.....	Smooth	S&E	‡D. clouds. ...	
¶ Gettysburg, Nice, France.... ..	.....	.....	29.93	760.2	72	22.2	.....	ESE	.....	.....	2	.....	7	.....	.....	.....	.....	Light	SE	‡D. clouds....	
Hartford, Hampton Roads, Va	.....	.....	29.85	758.2	45	7.2	.....	WSW	.....	.....	2	.....	0	.....	.....	0	0	.....	.....	Pleasant.....	
Lackawana, Mare Island, Cal.	.....	.....	30.16	766.1	67	13.9	87	Calm	.....	.....	0	.....	10	.....	.....	.....	.....	Smooth	.....	‡D. clouds.....	
Marion, Port Said, Egypt.	.....	.....	30.27	768.8	61	16.1	94	N	.....	.....	2	.....	1	.....	E	.....	.....	Smooth	.....	‡D. clouds....	
Michigan, Erie, Pa.	.....	.....	29.28	743.7	20	— 6.7	70	NNE	.....	.....	2	.....	5	.....	NNE	.....	.....	.....	.....	Partly cl'dy.	
Monongahela, Baltimore, Md.	.....	.....	29.66	753.4	36	2.2	.....	NE	.....	.....	1	.....	..m	.....	.....	Blank	Blank	.....	.....	‡D. clouds.....	
New Hampshire, Port Royal, S. C.	.....	.....	30.20	767.1	47	8.3	.....	SW	.....	.....	2	.....	1	.....	.....	.....	.....	.....	.....	‡D. clouds.....	
Omaha, Panama.	.....	.....	30.11	764.8	75.5	24.2	93	NW	.....	.....	3	.....	1	.....	S	0	0	Smooth	.....	Pleasant.....	
Ossipee, Pensacola, Fla.	.....	.....	30.23	767.8	53	11.7	.....	WNW	.....	.....	1	.....	2	.....	W	.....	.....	.....	.....	‡D. clouds.....	
Pensacola, Panama.	.....	.....	30.09	764.3	78	25.6	91	NW	.....	.....	2	.....	1	.....	.....	0	0	.....	.....	Pleasant.. ...	
Plymouth, New Orleans, La.	.....	.....	30.18	766.6	50	10.0	72	S	.....	.....	2	.....	0	.....	.....	.....	.....	.....	.....	Misty.....	
Ranger, Hampton, Roads, Va.	.....	.....	29.84	757.9	42	5.6	.....	SSW	.....	.....	3–4	.....	0	.....	.....	.....	.....	Smooth	NE	Pleasant.....	
¶ Rio Bravo, Matamoras, Mex.	.....	.....	30.05	763.3	58	14.4	.....	NW	.....	.....	1	.....	10	.....	.....	.....	.....	.....	.....	Misty.....	
Santee, Annapolis, Md.	.....	.....	29.74	755.4	38	3.3	100	NNE	.....	.....	3	.....	10	.....	.....	.....	.....	.....	.....	Cloudy.....	
St. Louis, League Island, Pa.	.....	.....	29.58	751.3	34	1.1	.....	N	2	0.9	.....	.....	10	.....	NE	0	0	.....	.....	Overcast.....	
Vandalia. Constantinople, Turkey.	.....	.....	30.10	764.5	54	12.2	93	SSE	.....	.....	2	.....	9	.....	E	.....	.....	.....	.....	‡D. clouds.....	
Wabash, Boston, Mass.	.....	.....	29.70	754.4	25	— 3.9	.....	WSW	2	0.9	.....	.....	7	.....	ENE	0	0	.....	.....	Hazy.....	
Wyoming, Washington, D.C.	.....	.....	29.68†	753.9	32	0.0	.....	N	.....	.....	1	.....	0	.....	.....	.....	.....	.....	.....	.....	

* It is not known that the barometer is corrected for temperature, instrumental error or elevation. † Aneroid Barometer. ‡ Detached clouds. ¶ Barometer corrected for instrumental error and reduced to sea-level.

UNITED STATES MARINE SERIES

REPORTED TO THE OFFICE OF THE CHIEF SIGNAL OFFICER OF THE ARMY.

NAMES OF VESSELS.	True course toward—	Hourly rate in knots.	Barometer reduced to sea-level.		Temperature of the Air.		Relative Humidity.	Wind.				Clouds.				State of Ocean.	Direction of swell from—	Weather.	OBSERVER.
								Direction.	Velocity.		Force.	Amount.		Direction.					
												Up'er	Low'r	Upper.	Lower.				
			Inches.	Millimeters.	Fahrenheit.	Centigrade.	Per cent.	From—	Miles per hour.	Meters per second.	0—10.	0—10.	0—10.	From—	From—				
PACIFIC MAIL S. S. CO. MARINE SERIES. Furnished by the coöperation of ————, President; Williams, Blanchard & Co., Agents.																			
S. S. City of Peking																			Lt. Z. L. Tanner, U.S.N
OCCIDENTAL AND ORIENTAL S. S. CO. MARINE SERIES. Furnished by the coöperation of George H. Bradbury, President; T. H. Goodman, Agent.																			
S. S. Belgic																			Capt. John Metcalf.
S. S. Gaelic																			Capt. W. H. Kidley.
S. S. Oceanic																			Capt. H. Parsell.
NORTH GERMAN LLOYD OF BREMEN MARINE SERIES. Furnished by the coöperation of A. Schumacher & Co., Agents.																			
S. S. Baltimore																			Capt. H. Andressen.
S. S. Berlin																			Capt. C. Pohle.
S. S. Braunschweig																			Capt. K. Undütsch.
S. S. Nürnberg N. 49°, 22′, W. 11°, 19′	E ¼ N		30.10	764.5	50.0	10.0		NNW			6–7		10			Very high.		Overcast	Capt. A. Jaeger.
S. S. Ohio																			Capt. G. Meyer.
MARINE SERIES. (Miscellaneous.) Furnished by the coöperation of the Observer named.																			
Schooner Addie Fuller. N. 33°, 57′, W. 77°, 00′	ENE	7.5	29.93	760.2	60	15.6	71	SW	20	8.9		0	Haze			Rough.		Hazy	Capt. James Jorgensen

NOTE.—The schooner Addie Fuller gives the amount of cloudiness by the scale 0 to 4.

COLLATED AT THE OFFICE OF THE CHIEF SIGNAL OFFICER OF THE ARMY, WASHINGTON, D. C.

The records which appear in this Bulletin are copied from the regular exchanges of this office, made in each instance in compliance with an especial request and are published for the uses of the coöperating observers. The barometric readings in the first two columns are reduced to freezing and their respective standards; those in the second two also to mean sea-level. The "weather" is generally published as given.

When the distinction between the upper and lower strata of clouds is not reported, the *kinds* or *types*, viz: cirrus, cumulus, stratus, nimbus, scud, fracto, pallio, haze, fog and smoke, as indicated, respectively, by the letters c, k, s, n, d, f, p, hz., fg. and sm'e, are generally published with the amount in the lower-cloud column. The distinction between the upper and lower strata is carefully made in the United States Series and a portion of the Canadian Series, and the types are indicated by the above letters or their combinations in the proper column.

Albert J. Myer

Brig. Gen. (Bvt. Assg'd.) Chief Signal Officer, U. S. A.

BULLETIN

OF

INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON FEBRUARY 20, 1877.

7:35 A. M. WASHINGTON mean time.

6:7 A. M. MEXICO mean time.
7:7 A. M. SAN JOSE mean time.
0:6 P. M. LISBON mean time.
0:28 P. M. MADRID mean time.
0:43 P. M. GREENWICH mean time.
0:53 P. M. PARIS mean time.
1:1 P. M. BRUSSELS mean time.
1:4 P. M. UTRECHT mean time.
1:18 P. M. BERNE mean time.
1:26 P. M. CHRISTIANIA mean time.

1:33 P. M. COPENHAGEN mean time.
1:38 P. M. ROME mean time.
1:37 P. M. BERLIN mean time.
1:49 P. M. VIENNA mean time.
1:55 P. M. STOCKHOLM mean time.
2:18 P. M. ATHENS mean time.
2:39 P. M. CONSTANTINOPLE mean time.
2:44 P. M. ST. PETERSBURG mean time.
6:36 P. M. CALCUTTA mean time.
10:2 P. M. TOKEI mean time.

ALGERIAN SERIES.

Furnished by the coöperation of General d'Eudeville, Commandant Supérieur du Génie in Algeria.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Nemours			30.13	765.2	64.4	18.0		S			2		2			0	0	Clear	Michel.
Algiers			29.95	760.6	61.7	16.5		SW			4		2			0	0	Clear	Biscarrat.
La Calle			29.80	757.0	55.4	13.0		N			3		4			0.039	1.0	Fair	Fleury.
Tunis			29.95	760.8	57.4	14.1		N			2		2			0	0	Clear	Jacques.
Saida																			
Tebessa			30.08	764.0	47.3	8 5		WNW			3		3			Inap.	Inap.	Fair	Millot.
Geriville			29.83	757.6	51 8	11.0		NNW			3		6			Inap.	Inap.	Fair	Bourgeois.
Laghouat			30.05	763.2	45.0	7.2		NNE			4		5			0	0	Fair	Lemaillot.
Biskra			30.03	762.7	55.6	13.1		E			2		6			0	0	Fair	Guyot.
			29.99	761.7	54.0	12.2		E			3		8			0	0	Cloudy	Kuntz.

NOTE.—In the originals the distinction between the amount of upper and lower clouds is apparently not made. The weather is published as given. The rain-fall is measured at 7 a. m., local time.

AUSTRIAN SERIES.

Furnished by the cooperation of Professor Dr. Julius Hann, Director of the Imperial and Royal Central Meteorological Institute at Vienna.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Agram			29.69	754.1	46.4	8.0	62	SW			2		10			0	0		Prof. Ivan Stozir.
Cracow, I. R. Observatory			29.65	753.0	43.2	6.2	67	ENE			1		10			0	0		Dr. Wierzbiski.
Eperies			29.81	757.1	30.0	2.2	93	S			2		10			0.008	0.20	Foggy	Julius Mikolik.
Gratz			29.63	752.7	40.6	4.8	70	Calm			0		6			0	0		Andreas Rospini.
Hermannstadt	28.37	720.5	29.63	752.7	40.6	4.8	70	Calm			0		6			0	0		Prof. Reissenberger.
Kremsmünster	28.39	721.0	29.83	757.7	43.5	6.4	70	SE			3		1			0	0		Prof. C. Wagner.
Lemberg	28.08	713.4	29.42	747.3	43.5	6.4	62	E			3		3			0	0		Dr. T. Stanecki.
Nyiregyhaza			29.69	754.2	34.2	1.2	89	SE			1		5			0	0		Habasuda Daniel.
Poln																			
Szegedin			29.72	755.0	49.8	9.9	75	S			3		10ks			0	0		I.R.Hydrographic Office.
Trieste			29.76	755.9	43.5	6.4	79	SE			3		10			0	0		Karl Stancel.
Vienna			29.74	755.5	49.3	9.6	73	Calm			0		8			0.185	4.7	Raining	Prof. V. Farolfi.
			29.52	749.7	43.2	6.2	66	S			2		5			0	0		I. R. Central Met. Ob'y.

NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 7 p. m., local time. The elevation of Gratz is 343.5 meters, or 1,126.9 feet; Hermannstadt, 407.8 meters, or 1,337.9 feet; Kremsmünster, 383.6 meters, or 1,258.5 feet.

BELGIAN SERIES.

Furnished by the cooperation of J. C. Houzeau, Director of the Royal Observatory at Brussels.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Arlon																			
Brussels			29.20	741.7	34.0	1.6	92	SSE			0	10				0.327	8.3	Snowing	Royal Observatory.
Furnes			29.04	737.6	39.0	3.9	88	SW			2	10n		SW		0.724	18.40		
Maeseyck			29.05	737.8	40.3	4.6	83	WNW			2	6				0.244	6.2		
			29.08	738.6	40.5	4.7	78	SSW			6	10				0.057	2.2	Raining	

NOTE.—In the originals, the weather is occasionally given in general notes.

BRITISH SERIES

Furnished by the coöperation of Robert H. Scott, Esq., Director of the Meteorological Office, London, Alexander Buchan, Secretary of the Scottish Meteorological Society, Edinburgh, and the respective Observers.

STATIONS.	Barometer. Corrected for instrumental error and temperature. Inches.	Barometer. Corrected for instrumental error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Upper 0—10.	Clouds. Amount. Lower 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Aberdeen			29.29	744.0	39.4	4.1		NW	26	11.6			3			0	0	Blue sky	William Boswell.
Ardrossan			29.38	746.2	43	6.1		NW			6		6					Showery	William McNeil.
Armagh, Observatory			29.62	752.3	38.2	3.4		NNW	18	8.0			10					Hailing	S. Call, for Dr. Robinson.
Bidston (Liverpool Obs.)			29.42	747.3	41.3	5.2		WNW	47	21.0			8					Overcast	John Hartnup.
Birr Castle, (Parsonstown)			29.75	755.6	44.6	6.9		WNW			5–6		7					Squally	J. Dreyer.
Bradford			29.35	745.5	42.0	5.6		NW			4		5			0.34	8.6	*D. clouds	J. McLandsborough.
Bridgetown, (Barbados)			30.05	763.3	83	28.3		NE			1		6					*D. clouds	Sergt. J. F. Halanen, A.
Cambridge, Observatory			29.29	744.0	41.0	5.0		NNW			6		10			Blank	Blank	Squally	H. Todd. [H.C.
Cardington			29.33	745.0	43.4	6.3		NNW			8		7					*D. clouds	John McLaren.
Carlisle																			T. Bell, for J. Cartmell.
Chatham, School M. E.			29.36	745.7	40.2	4.6		N			5		6					*D. clouds	Maj. C. N. Martin, R.E.
Dartmoor	28.20	716.3	29.74	755.4	35.6	2.0		N			8		8					Rain & hail	R. E. Power.
Davos Platz, (Switzerland)	24.30	617.2			34.2	1.2	63	S			2		6			0.08?	2.11	*D. clouds	Francis Redford, M. A.
Donaghadee			29.49	749.0	40	4.4		NW			6		10					Raining	J. Mac Gowan.
Dover			29.18	741.2	39	3.9		WNW			6		7					Squally	J. Costello.
Eccles, (near Manchester)			29.37	746.0	44.1	6.7		NW	12.8	5.7			6					Squally	Thomas Mackereth.
Falmouth, Observatory			29.76	755.9	47.3	8.5		NW			6		8					Squally	The Staff.
Fort Napier, (Natal)	27.65	702.3	29.89	759.2	75.3	24.1		E			2		10					Overcast	P'vt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.93	760.2	88	31.1		N			1		3					*D. clouds	
Galway, Queen's College			29.75	755.6	44	6.7		W			8		10					Raining	Prof. A. H. Curtis.
Gibraltar, (Mediterranean)			30.21	767.3	65.8	18.8		W			6		0					Blue sky	Corpl. C. Aitken, A.H.C.
Glasgow, Observatory			29.36	745.7	41.0	5.0		WNW			3		7					*D. clouds	Lewis Stuart.
Great Yarmouth			29.09	738.9	40	4.4		NNW			6		8					Raining	G. T. Watson.
Greenwich, Royal Obs'y			29.31	744.5	42.2	5.7		NNW			6		10			Blank	Blank	Overcast	The Staff, for G. B. Airy.
Guernsey			29.62	752.3	47	8.3		WNW			8		5			Blank	Blank	Squally	Dr. S. E. Hoskins.
Helston			29.80	756.9	46	7.8		NW			8		4k			Blank	Blank	Squally	M. P. Moyle.
Holyhead			29.50	749.3	42	5.6		NNW			8		10					Squally	John Tilston.
Kew, Observatory			29.34	745.2	44.1	6.7		NW	34	15.2			8					Threatening	The Staff.
Kingstown			29.63	752.6	41	5.0		NW			6		5					*D. clouds	George Mitchell.
Leicester Museum			29.36	745.7	44.5	6.9		NW			4		6					*D. clouds	Wm. J. Harrison, F.G.S.
Malta, (Mediterranean)			29.75	755.6	67.8	14.3		NW			3		6k					*D. clouds	Corp'l. P. Bravis, A.H.C.
Nairn			29.35	745.5	39	3.9		NW			2		10			Blank	Blank	Overcast	W. D. Penny.
Nassau, (Bahamas)			30.06	763.5	67.5	19.7		NW			2		6					Overcast	Surg. Maj. Henry.
Nottingham, Observatory			29.36	745.7	44.1	6.7		NW			6		2k		NW	0.41?	10.5+	Blue sky	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			29.39	746.5	43.0	6.1		NW			6		9			Blank	Blank	*D. clouds	Rev. Stephen Whitty.
Oxford, Radcliff Obs'y			29.40	746.7	44	6.7		NW			6		8					Threatening	J. Lucas.
Plymouth			29.67	753.6	49	9.4		NNW			6		5					Squally	John Merrifield.
Roche's Point			29.79	756.7	45	7.2		NNW			7		8					¾ clouded	W. Kennedy.
Saint Ann's Head			29.63	752.6	44	6.7		NW			8		6					Hailing	John C. Walker.
Saint Helier, (Jersey)			29.62	752.3	49.4	9.7		NW			7		5					½ clouded	A. P. Amy.
Sandwick Manse, (Orkneys)			29.36	745.7	39	3.9		NW	14	6.3			2					Show ry	Rev. C. Clouston, LL. D.
Scarborough																			F. Shaw.
Scutari Cemetery, (Turkey)			30.00	762.0	44.6	7.0		NE			1		10					Raining	Sergt. W. H. Lyne.
Sheffield			29.41	747.0	43.5	6.6		NNW			4		5			0	0	Blue sky	W. F. Cooper.
Silloth Rectory			29.38	746.2	47.5	8.6	76	NW			2		2			0	0	*D. clouds	Rev. Francis Redford
Stonyhurst, Observatory			29.38	746.2	41.5	5.3		NW			5		4					Blue sky	Rev. S. J. Perry.
Stornoway, Lewis C., (Hebr.)			29.42	747.3	37	2.8		NW			5		10					Hailing	John Smith.
Stratfield Turgiss			29.38	746.2	44.4	6.9		NW			3		4					Squally	Rev. Charles H. Griffith.
Thurso			29.31	744.5	43	6.1		NNW			4		7					*D. clouds	John Trotter.
Truro, Royal Institution			29.72	754.9	49	9.4		NW			9		10					Raining	W. Newcombe.
Valencia, Observatory			29.98	761.5	46.9	8.3		NW	34	15.2			10					Showery	The Staff.
SUB-SERIES.																			
Calf of Man, (Isle of Man)																			Henry Mercer.
Cape Good Hope, Obs'y			29.94	760.5	78.0	25.6	45	SE	22	9.8		0	0						The Staff, for E. J. Stone.
Hobart Town, (Tasmania)			29.72	754.9	69.0	20.6	78	NW			2		6kn			0	0		Francis Abbott, F.R.A.S.
Leith, Restalrig Park			29.37	746.0	42.2	5.7		NW			2		9k			0.25	6.3	Cloudy	Andrew Gibb.
Mauritius, Observatory			30.01	762.2	82.0	27.8	71	SSE	4.0	1.8		0	6		SSE	0	0	Fine	C. Meldrum.
Melbourne, Observatory			30.06	763.5	62.1	16.7	67	SE	5	2.2			5			0	0	Fine	R. L. J. Ellery.
Monach L't-house, (Hebrides)																			J. Youngclause.
North Unst, (Shetland Is.)																			Robert Burnet.

NOTE.—Generally, the originals do not give the relative humidity, rain-fall, or distinction between upper and lower clouds. The originals give the wind direction to 32 points and weather by the Beaufort notation. The originals give the barometer for Aberdeen, Cardington, Freetown, Galway, Oxford, St. Helier, Sandwick, Scarborough, Stonyhurst, Leith, Monach and North Unst as read off and the amount of cloudiness for Stornoway by the scale 0 to 4. The wind-force is given by the scale 0 to 12 in the official series; 0 to 6 in the sub-series; except in lbs. per square foot for Greenwich and Hobart Town. The rain-fall is measured at Aberdeen at 10 a. m.; Bradford, 9 a. m.; Hobart Town, 7:30 a. m.; Nottingham, 6 p. m.; Mauritius, 9 a. m., local time. The elevation of Dartmoor is 1,400 feet, or 426.7 meters; Davos Platz, 5,165? feet, or 1,576.0? meters; Fort Napier, 2,200 feet, or 670.6 meters. *Detached clouds.

By authority of the MINISTER OF FOREIGN AFFAIRS.

COSTA RICA SERIES.

Furnished by the coöperation of Senor Federico Maison, Director of the Central Office of Statistics and Meteorology.

San José																			

DANISH SERIES.

Furnished by the coöperation of Captain N. Hoffmeyer, Director of the Royal Danish Meteorological Institute at Copenhagen.

Copenhagen			29.33	744.9	34.0	1.1	94	SE			2		10					Foggy	
Fanöe			29.23	742.5	36.9	2.7	89	E			4		8						
Godthaab, (Greenland)			29.48	748.7	31.5	— 0.3	90	Calm			0		10					Raining	
Stykkisholm, (Iceland)			30.19	766.7	14.4	— 9.8	94	NE			6		5						
Thorshavn, (Faröe)			29.44	747.8	36.7	2.6	85	NNW			6		7					Snowing	
Vestervig			29.25	742.9	34.9	1.6	96	SE			2		10					Foggy	

NOTE.—The originals give the wind-force by the scale 0 to 6; occasionally, weather by Vienna symbols; no distinction between the amount of upper and lower clouds.

FRENCH SERIES.

Furnished by the co operation of His Excellency, U. J. Le Verrier, Director of the Paris Observatory, and the respective Observers.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters	Weather	Observer.
Alengon			29.54	750.3	48.2	9	71	NNW			8		8kn		NNW	0.29	7.6	Very cloudy	Normal School.
Amiens			29.21	741.8	43.2	6.2	73	NE			3		10			0.340	8.8	Covered	Normal School.
Avignon			29.71	754.7	50.7	10.4	70	S			1		10			0	0	Covered	Normal School.
Bar-sur-Seine			29.41	747.1	43.3	6.3	66	SW			6		10		W	0.441	11.2	Raining	C. Saillard.
Beaumette, (near Angers)			29.66	753.3	46.2	7.9	63	W	51.0	22.8			10		NW	0.177	4.5	Rain & snow	Beaumette Observ'tory.
Beauvais			29.31	744.5	39.4	4.1	85	WNW			6		10		WNW	0.35	9.	Covered	Normal School.
Besançon			29.58	751.2	41.7	5.4	75	SSW			4		8		W	0.287	7.3	Very cloudy	Normal School.
Bourg en Bresse			29.74	755.3	48.2	9	63	S			2		5n		E	0.16	4.	Cloudy	Normal School.
Bourges			29.61	752.1	46.0	7.8	77	SW			8		10		WSW	0.343	8.7	Covered	Normal School.
Brest			29.80	756.8	48.7	9.3	58	NW			7		4		NW	0.187	4.75	Squally	Naval Observatory.
Carcassonne			29.85	758.2	54.5	12.5	86	W			1		5		E	0.091	2.5	Cloudy	Normal School.
Caen																			Normal School.
Chartres			29.45	747.9	42.1	5.6	75	NNW			8		10		SSE	0	0	Covered	Normal School.
Châlons-sur-Marne			29.27	743.4	40.8	4.9	84	W			8		10n		E	0.610	15.5	Covered	Normal School.
Clermont			29.66	753.4	46.4	8.0	48	SW			6		8		W	0.051	1.3		Puy de Dome Obs'y.
Commercy			29.45	748.0	39.6	4.2	80	WSW			8		10			0.571	14.5	Covered	Normal School.
Commune de Gréasque*			29.78	756.5	43.9	6.6	91	W			2		10		SW	0	0		M. Kina.
Grenoble			29.75	755.6	38.1	3.4	97	NW			1		10n			0.04	1.	Raining	Normal School.
La Roche-sur-Yon			29.74	755.4	49.6	9.8	94	NW			8		2		W	0.098	2.5	Slightly cl'dy	Normal School.
Le Mans			29.58	751.3	42.4	5.8	88	NW			6		5		NW	0.39	10.	Cloudy	Normal School.
Lons-Le-Saulnier			29.59	751.6	43.0	6.1	78	WSW			6		8		E	0	0	Very cloudy	Normal School.
Lorient			29.84	758.0	49.3	9.6	95	NW			10?		10			0.331	8.4	Raining	Naval Observatory.
Mâcon			29.75	755.6	43.3	6.3	80	S			2		5		E	0.04	1.	Cloudy	Normal School.
Metz			29.35	745.6	39.7	4.3	90	SW			6		10			0.236	6.0	Storm	M. Schuster.
Mirecourt			29.38	746.2	40.3	4.6	93	SW			6		10		NE	0.16	4.	Covered	Normal School.
Nismes			29.74	755.4	57.9	14.4	50	NW			2	ac		NW		0	0		Normal School.
Orleans			29.49	749.0	45.3	7.4	77	SSW			6		2		SSW	0.45	11.5	Slightly cl'dy	Normal School.
Paris, Observatory			29.35	745.6	41.9	5.5	73	WNW			8		10n		WNW	0.40	10.22	Rainy	National Observatory.
Parthenay																			Normal School.
Privas																			Normal School.
Rochefort, Observatory			29.73	755.1	39.2	4	70	NW			2		5		NW	0	0	Cloudy	Normal School.
Rouen			29.84	757.8	48.2	9.0	76	WNW			8		10		E	0.24	6.	Raining	Naval Observatory.
Saint Lo			29.40	746.7	45.3	7.4	61	WNW			8		10		NW	0.39	10.1	Covered	Normal School.
Tarbes																			Normal School.
Villefranche	28.86	733.1	29.07	761.1	45.5	7.5	91	W			2		10					Raining	Normal School.
			29.08	753.8	46.8	8.2	77	SW			6		5		NW	0	0	Cloudy	Normal School.
SUB-SERIES.																			
Fort de France, Martinique			29.91	759.7	75.6	24.2													L'Abbé Marchési.
Marseilles			29.72	754.8	49.6	9.8	71	W			3		10			0	0	Very cloudy	Marseilles Observatory.
Mont-Louis	24.63	625.5	29.94	760.5	35.2	1.8	68	SW	14.9	6.66			8		W	0.008	0.2		—. Falguère.
Montsouris, Paris			29.34	745.1	42.3	5.7	78	W			6		10		W	0.36	9.2	Raining	Montsouris Observatory
Perpignan			29.80	757.0	54.7	12.6	56	NW	33.6	15.00			7		W	0.36	9.2		Dr. Fines.
Pic du Midi, (Summit,) H. P.																			M. Baylac.
Pic du Midi, (Plantade,) H. P.	22.24	564.9			22.1	— 5.5		NW			8–10		10			1.433	36.4	Snowy	General de Nansouty.
Saint Maur, (near Paris)			29.35	745.5	41.9	5.5	81	WNW			4		10			0.27	6.9	Raining	E. Renou.
Toulouse			29.89	759.1	48.2	9.0	70	NW			6		5			0.28	7.1	Showery	Toulouse Observatory.
Tours			29.63	752.5	43.2	6.2	85	WNW			6		7		WNW	0.559	14.2		C. Marquet.
Versailles, (near Paris)			29.36	745.7	42.1	5.6	78	WSW			6		10			0.405	10.27	Raining	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai)			30.25	768.3	41.5	5.3	74	SSE	16.8	7.5			7			0	0		Marc Dechevrens, S. J.

NOTE.—Generally, the originals give the wind-force by the scale 0 to 7; no distinction between upper and lower clouds, and, in the other series, the amount by the scale 0 to 4 the rain-fall as measured at 7, 8 or 9 a. m., local time; at Clermont, 9 a. m. of the following day; the weather in general terms as published. The elevation of Clermont is 388 meters, or 1,272.9 feet; Commune de Gréasque, 322 meters, or 1,056.4 feet; Tarbes, 308 meters, or 1,010 feet; Mont-Louis, 1,884.40 meters, or 5,394.8 feet; Pic du Midi, (Summit,) 2,877 meters, or 9,439.1 feet; Pic du Midi, Plantade,) 2,366 meters, or 7,762.6 feet. In correcting the Mont-Louis barometric observations for altitude, the constant 135. millimeters has been added. *Bouches-du-Rhône

GERMAN SERIES.

Furnished by the co operation of Professor Dr. G. Neumayer, Director of the German Naval Observatory, Hamburg.

Bamberg			29.86	745.5	39.2	4.0	93	S			5		10	S		0.079	2.0		Prof. T. Hoh
Berlin			29.35	745.6	46.2	7.9	64	S			2		2			0.248	6.3	Raining	Prof. Arndt.
Breslau			29.52	749.7	46.0	7.8	62	S			4		3			0	0		Royal University Obs'y.
Carlsruhe			29.33	745.0	42.6	5.9	71	SW			10		10			0	0	Stormy	A. Senz.
Cassel			29.24	742.8	38.7	3.7	82	SSW			6		10	W		0	0		Dr. H. Möhl.
Crefeld			29.08	738.5	43.5	6.4	66	SW			4		6			0.20	5.	Raining	Director Lose.
Emden			29.14	740.1	37.6	3.1	96	SE			3		10			0	0		Prof. Prestel.
Frankfort on the Main			29.34	745.3	41.9	5.5	75	SSW			4		9			0.362	9.2	Raining	Physical Society.
Friedrichshafen	28.06	712.8	29.52	749.8	38.3	3.5	88	W			5		10			0.035	0.9	Raining	M. Wilhelm.
Hamburg			29.21	742.0	41.4	5.2	72	SSE			5		10s,n	SSE		0.169	4.3	Light rain	Captain F. Hegemann.
Kiel			29.22	742.2	40.6	4.8	80	SE			2		8			0.224	5.7		Prof. G. Karsten.
Königsberg, (Prussia)			29.48	748.9	35.2	1.8	82	S			7		5			0.004	0.1	Snowing	Prof. E. Luther.
Köslin			29.41	747.0	38.8	3.8		S			2		10			0.559	14.2	Raining	H. Müller.
Leipsic			29.35	745.4	44.6	7.0	61	S			5		8	SW		0.039	1.0		Prof. Bruhns.
Memel			29.58	750.5	31.8	— 0.1	100	SSE			7		10ks			0.024	0.6	Snowing	Reinbrecht & Skalweit.
Münster			29.07	738.3	39.2	4.0	84	SW			2		10			0.248	6.3		Prof. E. Heis.
Neufahrwasser			29.46	748.2	37.2	2.9	90	S			3		10			0.008	0.2		A Lothe.
Posen			29.47	748.4	45.5	7.5	73	SW			6		9			0	0		Dr. Magener.
Strassburg, (in Alsace)			29.41	747.1	43.5	6.4	92	SW			6		10	SW		0	0		Dr. Schur.
Stuttgart			29.37	746.0	41.5	5.3	72	W			4		8			0.031	0.8		Prof. Schoder.
Thorn																			Dr. Hasenbalg.
Treves, (Trier)			29.11	739.3	42.4	5.8	67	SSW			9		10			0.287	7.3	Hailing	Prof. Flesch.
Weissenburg, (Bavaria)	27.91	709.0	29.44	747.7	37.9	3.3	87	S			4		10			0.126	3.2	Rain & snow	Dr. von Bebber.
Wustrow, Naval School			29.39	746.6	39.9	4.4	88	SSE			3		10			0.276	7.0		E. F. Schütz.
GERMAN NAVAL SERIES.																			

NOTE.—The elevation of Friedrichshafen is 412.4 meters, or 1,356.3 feet; Weissenburg, 481 meters, or 1,417.0 ft. In the originals the distinction between the amount of upper and lower clouds is not made. It is not always certain that the remarks in the weather column refer to the moment of observation.

GREEK SERIES.

Furnished by the coöperation of Professor Dr. J. F. Julius Schmidt, Director of the Royal Observatory at Athens.

STATIONS.	Barometer: Corrected for instrum'tal error and temperature. Inches.	Barometer: Corrected for instrum'tal error and temperature. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Athens	.....	.....	29.91	759.7	60.3	15.7	.....	SE	.....	.....	.....	...	.....	.....	.....	.....	.....	Cloudy.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

NOTE.—The originals give the barometer corrected, but not reduced to sea-level; occasionally the kind of clouds; the weather as published. They omit the humidity wind-force, amount of cloudiness and rain-fall.

INDIAN SERIES.

Furnished by the coöperation of H. F. Blanford, Meteorological Reporter to the Government of India.

Kurrachee	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Deesa	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Bombay	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Poona	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Lahore	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Belgaum	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Bangalore	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Rorkee	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Agra	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Trichinopoly	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Nagpur	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Madras	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Lucknow	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Allahabad	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Patna	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Hazaribagh	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cuttack	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Calcutta (Alipore)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Goalpara	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Chittagong	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Sibsagar	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Rangoon	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Jubbulpore	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
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ITALIAN SERIES.

Furnished by the cooperation of His Excellency the Minister of Agriculture, Industry and Commerce, and the respective Observers.

Udine	.....	.....	29.69	754.1	45.5	7.5	67	SE	0.7	0.3	.....	.....	10	.....	.....	0	0	.....	Prof. Giovanni Clodig.
Stelvio	21.63	549.4	.....	.....	18.1	— 7.7	.....	W	.....	.....	8	.....	10	.....	.....	0	0	.....	Signora Ernesta Manfredi.
Valdobbia	21.66	550.2	.....	.....	20.8	— 6.2	84	NNE	.....	.....	2	.....	10	.....	.....	.....	.....	Snowing.....	Ab. Dom. Mongini.
Padua	.....	.....	29.69	754.0	44.6	7.0	79	N	7.4	3.3	.....	.....	10	SSW	.....	0	0	.....	Prof. Dott. Lorenzoni.
Vicenza	.....	.....	29.70	754.4	42.3	5.7	85	N	1.3	0.6	.....	.....	10	.....	.....	0.067	1.7	.....	Conte Alm. Da Schio.
Verona	.....	.....	29.69	754.0	44.4	6.9	79	E	.....	.....	6	.....	10	.....	.....	0	0	.....	Dott. B. Bertoncelli.
Bergamo	28.30	718.9	29.65	753.1	37.8	3.2	80	NE	.....	.....	4	.....	10	.....	.....	0.035	0.9	Light rain....	Prof Trionfini Carlo.
Domodossola	.....	.....	29.63	752.5	41.0	5.0	82	Calm	.....	.....	0	.....	10	.....	.....	0.059	1.5	Raining.....	Prof. Giuseppe Calza.
Milan	.....	.....	29.63	752.6	42.1	5.6	86	E	.....	.....	6	.....	10	E	.....	0	0	.....	Ab. Gio. Capelli
Pavia	.....	.....	29.63	752.6	41.9	5.5	86	E	.....	.....	2	.....	10	.....	.....	0.039	1.0	Raining.....	Prof. Gio. Cantoni.
Moncalieri	.....	.....	29.64	752.8	44.2	6.8	71	ENE	2.5	1.1	.....	.....	9	NW	.....	0	0	.....	Pro P. F. Denza.
Mondovi	27.69	703.2	29.63	752.6	42.6	5.9	60	WNW	.....	.....	4	.....	6	W	.....	0	0	.....	Prof. F. C. Bruno.
Porto Maurizio	.....	.....	29.65	753.0	53.2	11.8	47	WSW	.....	.....	4	.....	9	.....	.....	0	0	.....	Prof. . Vassallo.
Genoa	.....	.....	29.62	752.4	51.4	10.8	60	SE	8.7	3.9	.....	.....	10	S	.....	0.055	1.4	Raining.....	Prof. G M. Garibaldi.
Piacenza	.....	.....	29.63	752.7	41.5	5.3	86	E	16.8	7.5	.....	.....	10	.....	.....	0	0	.....	Dott. G. anzi.
Parma	.....	.....	29.63	752.6	36.5	2.5	90	ESE	.....	.....	4	.....	10	.....	.....	0	0	.....	Prof. P. Pigorini.
Florence	.....	.....	29.74	755.3	51.8	11.0	71	W	.....	.....	2	.....	10	.....	.....	0	0	.....	Cav. F. Meucci.
Leghorn	28.49	723.6	29.71	754.7	54.7	12.6	65	SSW	11.9	5.3	.....	.....	9	SW	.....	0	0	.....	Prof. P. Monte.
Siena	28.18	715.8	29.71	754.7	52.5	11.4	45	S	1.8	0.8	.....	.....	7	SW	.....	0.020	0.5	Light rain...	Prof. L. Toscani.
Urbino	.....	.....	29.77	756.2	47.3	8.5	55	SW	.....	.....	2	.....	10	.....	.....	0	0	.....	Prof. P. Serpieri.
Pesaro	.....	.....	29.71	754.7	52.3	11.3	58	S	0	0	.....	.....	10	S	.....	0	0	.....	Prof. Luigi Guidi.
Ancona	.....	.....	29.69	754.2	50.9	10.5	59	SE	.....	.....	4	.....	10	.....	.....	0	0	.....	Prof. F. De— Bosis.
Grosseto	.....	.....	29.76	755.8	55.2	12.9	58	NNE	.....	.....	6	.....	7	S	.....	0	0	.....	Avv. P. Ponticelli.
Rome	.....	.....	29.80	756.8	55.8	13.2	64	SSW	3.8	1.7	.....	.....	8	SW	.....	0	0	.....	Prof's. P. Secchi & L. Respighi
Naples, O. U.	.....	.....	29.80	756.9	57.6	14.2	53	SW	.....	.....	2	.....	4	W	.....	0	0	.....	Prof. L. Palmieri.
Lecce	.....	.....	29.84	758.0	50.2	10.1	78	E	6.3	2.8	.....	.....	10	.....	.....	0	0	.....	Prof. C. De—Giorgi.
Cosenza	.....	.....	29.86	758.4	48.7	9.3	79	NW	0	0	.....	.....	10	.....	.....	0.25	6.4	Raining.....	Prof. F. D. Conti.
Cagliari	.....	.....	29.83	757.7	56.7	13.7	72	NW	.....	.....	2	.....	8	NW	.....	0.012	0.3	Light rain ...	Prof. A. Pacinotti.
Ittiposto, (Sicily)	.....	.....	29.74	755.3	57.2	14.0	70	N	.....	.....	4	.....	10	N	.....	0	0	.....	Prof. F. Caffero.
Palermo	.....	.....	29.77	756.2	55.0	12.8	60	NE	5.6	2.5	.....	.....	10	.....	.....	0	0	.....	Prof. G. Cacciatore.
Caltanissetta	27.77	705.3	29.75	755.7	50.5	10.5	61	NW	.....	.....	6	.....	10	SE	.....	0.042	1.1	Raining.....	Prof. A. Pagani.
Siracusa	.....	.....	29.75	755.7	55.4	13.0	79	NNE	.....	.....	6	.....	10	NE	.....	0.030	0.9	Light rain..	Prof. V. Giuliano.
SUB-SERIES.																			
Naples, S. R.	.....	.....	29.82	757.4	53.6	12.0	57	NE	1.8	0.8	.....	.....	4	E	.....	0	0	... .	Prof. F. Brioschi
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
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NOTE.—The originals give the wind-force by the scale 0 to 4, or the velocity in kilometers per hour; generally, no distinction between upper and lower clouds occasionally the weather by the Vienna symbols. The elevation of Stelvio is 2,543.0 meters, or 8,342.9 feet; Valdobbia, 2,548.0 meters or 8,359.3 feet; Bergamo, 379.6 meters, or 1,24 3 feet; Mondovi, 556 meters, or 1,824.2 feet; Siena, 348.5 meters, or 1,143.3 feet; Urbino, 451 meters, or 1,479.7 feet; Caltanissetta, 570.3 meters, or 1,871.0 feet.

JAPANESE SERIES.

Furnished by the coöperation of the Imperial University of Tokei, Japan.

Tokei	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	....	Prof. P. V. Veeder.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	....	

NOTE.—The originals give the amount of cloudiness by the scale 0 to 4 without distinguishing between upper and lower clouds. The rain-fall is measured at 7 a. m., cal time.

By authority of the SECRETARY OF PUBLIC WORKS.

MEXICAN SERIES.

Furnished by the coöperation of Senor Mariano Barcena, Director of the Central Meteorological Observatory in the City of Mexico.

STATIONS.	BAROMETER. Corrected for instrum'tal error and temperature. Inches.	BAROMETER. Corrected for instrum'tal error and temperature. Millimeters.	BAROMETER. Reduced to sea-level. Inches.	BAROMETER. Reduced to sea-level. Millimeters.	TEMPERATURE OF THE AIR. Fahrenheit.	TEMPERATURE OF THE AIR. Centigrade.	RELATIVE HUMIDITY. Per cent.	WIND. Direction. From—	WIND. Velocity. Miles per hour.	WIND. Velocity. Meters per second.	WIND. Force. 0—10.	CLOUDS. Amount. Up'er 0—10.	CLOUDS. Amount. Low'r 0—10.	CLOUDS. Direction. Up er. From—	CLOUDS. Direction. Lower. From—	RAIN-FALL OR MELTED SNOW IN THE PAST 24 HOURS. Inches.	RAIN-FALL OR MELTED SNOW IN THE PAST 24 HOURS. Millimeters.	WEATHER.	OBSERVER.
Mexico																			Mariano Barcena.
																			Vicente Reyes.
																			Miguel Perez.

NOTE.—The elevation of Mexico is 2,290 meters, or 7,512.9 feet. The rain-fall is measured at 6 a. m., local time. (Engineers in charge.)

NETHERLANDS' SERIES.

Furnished by the cooperation of Professor Buys Ballot, Director of the Royal Meteorological Institute of the Netherlands at Utrecht.

Flushing			29.05	737.9	41.7	5.4		SSW			5					0.173	4.4		
Groningen			28.98	736.0	37.2	2.9										0.098	2.5		
Helder			28.98	736.0	42.8	6.0		SW			4					0.236	6.0		
Utrecht			29.00	736.6	40.5	4.7	85	SW			3		5			0.232	5.9	Cloudy	

NOTE.—The originals give the wind-pressure in kilograms per square meter; for Utrecht, they give the weather as published, from which the amount of cloudiness is taken by the scale 0 to 4, without distinguishing between upper and lower clouds. It is assumed that the barometer readings have been reduced to sea-level.

NORWEGIAN SERIES.

Furnished by the cooperation of Professor H. Mohn, Director of the Royal Norwegian Meteorological Institute at Christiania.

Bergen			29.26	743.2	37.0	2.8	72	SSE	6.0	2.7			6			0	0		
Brönö			29.41	747.0	28.4	— 2.0	70	S	6.7	3			8			0	0		
Christiania			29.33	745.0	21.7	— 5.7	82	ESE	5.1	2.3			1			0.307	7.8		
Tromsö			29.10	739.1	27.3	— 2.6	74	SW	13.4	6			10			0 118	3.0		

NOTE.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols. The cloudiness and weather at Bergen refer to 2h., p. m., local time, instead of 1h., 4 min.

PORTUGUESE SERIES.

Furnished by the cooperation of J. C. de Brito Capello, Director of the Meteorological Observatory of the Infante Don Luiz at Lisbon.

Angra, (Azores)			30.48	774.3	58.1	14.5	86	E	19.9	8.9			5	W		0	0		Dr. J. A. Sampaio.
Campo Major			30.39	770.3	55.4	13.0	41	N	16.1	7.2			2			0	0	Solar corona	Dr. A. M. R. dos Santos.
Funchal, (Madeira)			30.84	770.6	64 4	18.0	54	E	12.5	5.6			5			0	0		Capt. D. A. de Cunha.
Lisbon			30.43	772.8	56.3	13.5	57	NNE	29.8	13.3			4			0	0		The Observatory.
Ponta Delgada, (Azores)			30.48	774.2	59.4	15.2	78	ESE	9.8	4.4			3			0.004	0.1	Light rain	

NOTE.—The originals give the wind-velocity in kilometers per hour; occasionally, the weather by the Vienna symbols; the amount of cloudiness without distinguishing between upper and lower clouds; the barometer corrected but not reduced to sea-level. The rain-fall at Libson is measured at noon, instead of 0 h. 6 m., p. m.

RUSSIAN SERIES.

Furnished by the cooperation of Professor H. Wild, Director of the Imperial Central Physical Observatory of Russia, at St. Petersburg.

Warsaw			29.61	752.0	37.9	3.3	71	SE	13	6			10						Astronomical Obs.
Wilna			29.80	756.9	33.1	0.6	84	S	4	2			10						Astronomical Obs.
Dorpat			29.72	754 9	33.3	0.7	89	S	9	4			10						Physical Cabinet.
St. Petersburg			29.79	756.7	32.9	0 5	89	SSE	13	6			3						Central Physical Obs.
Kuopio			29.58	751.3	25.7	— 3.5	100	S	22	10			10					Snowing	Ch. Forsten.
Kieff			30.02	762.6	22.6	— 5.2	88	SE	9	4			9						Physical Cabinet.
Nikolaiev			30.03	762.8	24.6	— 4.1	91	NE	9	4			10					Snowing	Kurdakof
Kertch			30.02	762.4	32.7	0.4	87	ESE	7	3			10					Raining	Lagorio.
Moscow			30.23	767.7	25.0	— 3.9	75	S	4	2			5						Meteorological Obs.
Lugan			30.25	768.4	15.8	— 9.0	69	ESE	13	6			5						Meteorological Obs.
Archangel			29.78	756.4	15.8	— 9.0	94	SSW	18	8			10						Ogorodnikof.
Tiflis	28.92	734.6	30.40	772.2	39.7	4.3	70	Calm	0	0			7						Physical Observatory.
Astrakhan			30.52	775.3	15.8	— 9.0	72	Calm	0	0			0						Sebastianof.
Kusan			30.50	774.8	5.5	—14.7	67	SSW	11	5			0						Physical Cabinet.
Orenburg			30.25	768.3	26.8	— 2.9	87	E	16	7			5						Tschernischef.
Ekaterinburg	29.35	745.5	30.39	771.5	11.8	—11.2	85	WSW	13	6			0						Meteorogical Obs.
Nukus			30.44	773.2	20.3	— 6.5	87	W	9	4			10						
Kusaly																			Bobrof.
Tuslukend																			Michelson.
Barnaul	28.71	729.3	30.51	775.0	35.6	2.0	87	Calm	0	0			10						Meteorological Obs.
Yeniseisk			30.24	768.2	—13.2	—25.1	77	WSW	9	4			3						Marks.
Irkutsk			29.84	758.0	—10.3	—23.5	65	SW	2	1			0						Usolzef.
Peking, (China)																			Physical Observatory.
Nertchinsk			30.04	763.0	36.3	2.4	68	Calm	0	0			0						Meteorological Obs.
Vladivostock																			
Nikolaievsk, on the Amoor																			

NOTE.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols; they omit the rain-fall. The elevation of Tiflis is 469 meters, or 1,341.8 feet; Ekaterinburg, 306.4? m., or 1,005.2? ft.; Tashkend, 494.2? m., or 1,621.3? ft.; Irkutsk, 392 m., or 1,286 ft.; Nertchinsk, 592.0? m., or 1,942.2? ft.

SPANISH SERIES.

Furnished by the cooperation of Antonio Aguilar, Director of the Royal Observatory at Madrid, and of Don Cecilio Pujazon, Captain R. N. Director of the Naval Observatory at San Fernando.

Madrid			30.17	766.2	64.1	12.8	42	NW	16.4	7.33		0	3			0	0	Cloudy	Royal Observatory.
San Fernando			30.31	769.9	59.0	15.0	47	N	9.2	4.1		0	0			0	0		Naval Observatory.

NOTE.—The originals give the weather in general terms, as published; rain-fall for San Fernando from preceding to following midnight; wind-velocity for Madrid in kilometers per hour.

SWEDISH SERIES.

Furnished by the coöperation of Professor R. Rubenson, Director of the Royal Swedish Meteorological Institute, at Stockholm, and of Dr. H. H. Hildebrandsson, Chief of the Meteorological Division of the Upsala Observatory.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Haparanda			29.44	747.8	17.2	— 8.2	94	S			4.		10					Snowing	
Umea																			
Hernosand			29.25	742.9	31.8	— 0.1	94	Calm			0		10			0.248	6.3		
Stockholm			29.26	743.1	34.5	1.4	93	SW			2		10			0.094	2.4	Snowing	
Wisby			29.34	745.3	34.5	1.4	93	SSW			4		10			0.370	9.4	Rain & snow	
Sub-Series.																			
Upsala			29.27	743.5	29.7	— 1.3	93	SE	0	0			10			0.137	3.49	Snow & fog	Dr. Hildebrandsson.

Note.—The originals give the wind-force by the scale 0 to 6, and Upsala also velocity in meters per second; occasionally, the weather by the Vienna symbols, or in general terms; no distinction between the amount of upper and lower clouds. The rain-fall is measured at 8 a. m., local time.

SWISS SERIES.

Furnished by the coöperation of Professor R. Wolf, Director of the Observatory at Zurich, and of Professor E. Plantamour, Director of the Observatory at Geneva.

Geneva	28.21	716.5	29.69	754.0	38.3	3.5	80	SSW			7		10			0.102	2.6	Covered	The Observatory.
Zurich	27.90	708.6	29.60	751.8	35.6	2.0	91	W			2		10			0.047	1.2	Snowing	The Observatory.

Note.—For Geneva the corresponding departures from the normal values are: Barometer, —0.5 mm; Thermometer, —0.7 cent.; Relative Humidity, +10 per cent.

Note.—The rain-fall is measured at Zurich at 7 a. m. on the following day. The originals give the barometer corrected but not reduced to sea-level; the wind-force by the scale 0 to 4 for Zurich; the amount of cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The elevation of Geneva is 408 meters, or 1,339 feet, and that of Zurich 470 meters, or 1,542 feet.

TURKISH SERIES.

Furnished by the coöperation of A. Coumbary, Effendi, Director of the Central Observatory at Constantinople, and of Professor C. V. A. Van Dyck, Superintendent of the Lee Observatory at Beirut.

Constantinople																			
Fao, (Persian Gulf)																			
Salonica																			
Valona																			
Varna																			
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y			30.06	763.5	63.1	17.3	62	ENE			1		10cs			0	0	Overcast	Prof. C. V. A. Van Dyck

Note.—The originals give the wind-force by the scale 0 to 7, (except Beirut, by the scale 0 to 12, and Constantinople velocity in meters per second;) the weather in general terms as published; no distinction between upper and lower clouds, and, except Constantinople and Beirut, the amount by the scale 0 to 4. It is assumed that the barometer is reduced to sea-level.

CANADIAN SERIES.

Furnished by the coöperation of Professor G. T. Kingston, Director of the Magnetic Observatory at Toronto, and Superintendent of the Meteorological Office of the Dominion of Canada, and the respective Observers. Those marked with a star (*) are also telegraphed daily to the office of the Chief Signal Officer, U. S. Army.

Bathurst, N. B			29.46	748.3	16.1	— 8.8	93	NW	6	2.7			10						Hon. J. Ferguson.
Brockville, Ontario			29.99	761.7	14	—10.0		W	1	0.4		2c	0	W		0	0	Fair	W. R. Bigg.
*Chatham, N. B			29.45	748.0	12	—11.1	90	NW	9	4.0			10s		NW	0.01	0.3	Cloudy	G. A. Blair.
Charlottetown, P. E. Island			29.30	744.2	26	— 3.3	96	NW	5	2.2			10n			0.35	8.89	Light snow	H. J. Cundall, C. E.
Cornwall, Ontario			29.91	759.7	13.9	—10.1	80	W			1	1cs	1s	N		0.00	0.03	Fair	James Smith, M. A.
Dalhousie, N. B			29.53	750.0	12.0	—11.1	97	W			1					0.20	5.1	Snowing	H. A. Johnson.
Esquimault, B. C			29.91	759.7	43.3	6.3	92	N				2k	0			0.03	0.8	Clear	W. H. Bevis.
*Father Point, Quebec			29.61	752.1	18	— 7.8	97	Calm	0	0			10n			0.08	2.0	Light snow	J. McWilliams.
Fredericton, N. B			29.57	751.1	6.8	—14.0	86	Calm	0	0			10n			1nap.	1nap.	Light snow	Prof. Harrison.
*Fort Garry, Manitoba			29.94	760.5	28	— 2.2	88	S	18	8.0		0	2s		S	0	0	Fair	James Stewart.
Goderich, Ontario			30.25	768.3	13.5	—10.4	81	Calm			0	4c	2s	E		0	0	Fair	H. J. Strang, M. A.
Granton, Ontario	29.03	737.3	30.24	768.1	10.6	—11.9		NW			1	0	0			0	0	Clear	James Grant.
*Halifax, N. S			29.42	747.3	20	— 6.7	89	W	16	7.2			10n			0.53	13.21	Light snow	F. Allison, M. A.
Hamilton, Ontario			30.20	767.1	14.7	— 9.6	67	W			1	2c	0			0	0	Clear	G. Dickson.
Heart's Content, N. F			29.81	757.2	31	— 0.6	89	SE			2	0	0			0	0	Fine	E. Weedon.
*Kingston, Ontario			30.04	763.0	14	—10.0	86	W	1	0.4		0	0			0	0	Clear	S. Woods, M. A.
*Montreal, Quebec			29.83	757.7	19	— 7.2	73	N	16	7.2		0	5ks		N	0	0	Cloudy	C. H. McLeod, C. E.
*Ottawa, Ontario			29.93	760.2	12	—11.1	77	W	4	1.8		5cs	0	W		0	0	Fair	J. B. Haney.
*Parry Sound, Ontario			30.17	766.3	4	—15.6	82	Calm	0	0		2cs	2ks	N	N	0	0	Fair	Rev. R. Mosley.
Port Dover, Ontario			30.19	766.8	12	—11.1	80	NW	4	1.8		5ck	0	NW		0	0	Fair	H. Morgan.
Port Hastings, N. S			29.27	743.4	30.4	— 0.9		NW								0	0	Fine	Peter Grant.
Port Stanley, Ontario			30.23	767.8	16	— 8.9	79	NW	5	2.2		2ck	0	N		0	0	Clear	M. Payne.
*Quebec, Quebec			29.67	753.6	16	— 8.8	83	W	9	4.0		0	0			0	0	Clear	Capt. Ashe, R. N.
*Rockliffe, Ontario			30.06	763.5	17	— 8.3	93	NW	4	1.8		10cs	0	N		0	0	Fair	
St. John, N. B			29.57	751.1	10	—12.2	89	NW	8	1.3		4ks?	0			0.01	0.3	Fair	G. Murdoch, C. E.
*Saugeen, Ontario			30.16	766.8	5	—15.0	77	Calm	0	0		0	0			0	0	Clear	K. Stewart.
Stayner, Ontario			30.17	766.3	8	—13.3	75	NW	3	1.3		5ck	0	N		0	0	Fair	R. J. Cole.
Stratford, Ontario	28.83	732.3	30.24	768.1	7.5	—13.8	87	NW	3	1.3		3ck	0			0	0	Fine	C. J. MacGregor, M. A.
*Sydney, C. B			29.25	742.9	36	2.5	90	SW	12	5.4			8ks		SW	0.48	12.2	Clearing	T. C. Hill.
*Toronto, Ontario			30.14	765.5	15	— 9.4	67	NW	10	4.5		2cs	0	N		0	0	Clear	Magnetic Observatory.
Woodstock, Ontario			30.22	767.6	8.9	—12.8	88	N	9	4.0		3c	2s	NE		0	0	Fair	J. Montgomery.
Sub-Series.																			
St. Johns, Newfoundland			30.04	763.0	32.0	0.0	100	SE				Haze	Haze			1.20	30.5	Hazy	John Delany.

Note.—The originals for Brockville, Charlottetown, Port Dover, Port Stanley, Stayner, St. Johns, N. F. and those telegraphed, give the amount of cloudiness by the scale 0 to 4. The elevation of Granton is 1,015 feet, or 309.4 m.; Stratford, 1,182 feet, or 360.3 m

UNITED STATES SERIES.

Furnished by the coöperation of Bvt. Brig. Gen. Albert J. Myer, Chief Signal Officer, U. S. Army.

STATIONS.	BAROMETER. Corrected for instrum'tal error and temperature. Inches.	BAROMETER. Corrected for instrum'tal error and temperature. Millimeters.	BAROMETER. Reduced to sea-level. Inches.	BAROMETER. Reduced to sea-level. Millimeters.	TEMPERATURE OF THE AIR. Fahrenheit.	TEMPERATURE OF THE AIR. Centigrade.	RELATIVE HUMIDITY. Per cent.	WIND. Direction. From—	WIND. Velocity. Miles per hour.	WIND. Velocity. Meters per second.	WIND. Force. 0—10.	CLOUDS. Amount. Upper. 0—10.	CLOUDS. Amount. Low'r 0—10.	CLOUDS. Direction. Upper. From—	CLOUDS. Direction. Lower. From—	RAIN-FALL OR MELTED SNOW IN THE PAST 24 HOURS. Inches.	RAIN-FALL OR MELTED SNOW IN THE PAST 24 HOURS. Millimeters.	WEATHER	OBSERVER.
Albany, N. Y.	.....	.....	29.91	759.7	14	—10.0	81	Calm	0	0	.....	5ks	2s	.....	.....	0	0	Fair	
Alpena, Mich.	.....	.....	30.21	767.3	13	—10.6	62	W	5	2.2	.....	2c	0	NW	.....	0	0	Fair	
Atlantic City, N. J.	.....	.....	29.98	761.5	21	— 6.1	71	W	8	3.6	.....	1c	0	.....	.....	0.05	1.3	Clear	
Augusta, Ga.	.....	.....	30.00	762.0	48	8.9	63	N	10	4.5	.....	.....	10s	.....	N	0.10	2.5	Cloudy	
Baltimore, Md.	.....	.....	30.06	763.5	25	— 3.9	63	NW	3	1.3	.....	5k	2s	.....	.....	0.03	0.8	Fair	
Barnegat, N. J.	.....	.....	29.96	761.0	24	— 4.4	61	NW	12	4.5	.....	2c	0	W	.....	0.04	1.0	Clear	
Bismarck, Dakota	28.25	717.5	29.96	761.0	30	— 1.1	65	SW	3	1.3	.....	0	0	.....	.....	0	0	Clear	
Boston, Mass.	.....	.....	29.80	756.9	16	— 8.9	83	W	14	6.3	.....	4cs	0	W	.....	0	0	Fair	
Breckenridge, Minn.	.....	.....	30.21	767.3	20	— 6.7	72	SE	10	4.5	.....	0	0	.....	.....	0	0	Clear	
Buffalo, N. Y.	.....	.....	30.11	764.8	18.5	— 7.5	68	NW	3	1 3	.....	0	0	.....	.....	0.01	0.3	Clear	
Burlington, Vt.	.....	.....	29.85	758.2	20	— 6.7	84	W	7	3.1	.....	.....	10s	.....	.....	0.04	1.0	Cloudy	
Cairo, Ill.	.....	.....	30.44	773.2	26	— 3.3	88	N	10	4.5	.....	0	0	.....	.....	0	0	Clear	
Cape Hatteras, N. C.	.....	.....	29.91	759.7	34	1.1	79	NE	30	13.4	.....	.....	10s	.....	NE	0.12	3.0	Cloudy	
Cape Henry, Va.	.....	.....	30.02	762.5	32	0.0	69	N	22	9.8	.....	5k	0	N	.....	0	0	Fair	
Cape Lookout, N. C.	.....	.....	29.98	761.5	36	2.2	70	NE	36	16.1	.....	.....	10s	.....	.....	0.10	2.5	Cloudy	
Cape May, N. J.	.....	.....	29.99	761.7	26	— 3.3	65	NW	28	12.5	.....	0	0	.....	.....	Inap.	Inap.	Clear	
Charleston, S. C.	.....	.....	29.94	760.5	46	7.8	85	N	16	7.2	.....	.....	10n	.....	NE	0.25	6.3	Light rain	
Cheyenne, Wyoming	24.21	614.9	30.15	765.8	22	— 5.6	72	W	2	0.9	.....	0	0	.....	.....	0	0	Clear	
Chicago, Ill.	.....	.....	30.36	771.1	25	— 3.9	75	NW	3	1.3	.....	0	0	.....	.....	0	0	Clear	
Cincinnati, Ohio	.....	.....	30.27	768.8	26	— 3.3	76	N	8	3.6	.....	0	Sm'e	.....	N	0	0	Clear	
Cleveland, Ohio	.....	.....	30.26	768.6	22.5	— 5.3	66	NW	12	5.4	.....	Haze	0	.....	.....	Inap.	Inap.	Fair	
Corsicana, Texas	.....	.....	30.42	772.7	40	4.4	73	N	16	7 2	.....	5cs	0	.....	.....	0	0	Fair	
Davenport, Iowa	.....	.....	30.44	773.2	25	— 3.9	88	Calm	0	0	.....	0	1s	.....	.....	0	0	Clear	
Denison, Texas	.....	.....	30.50	774.7	36	2.2	79	N	5	2.2	.....	0	0	.....	.....	0	0	Clear	
Denver, Col.	24.91	632.7	30.13	765.3	27	— 2.8	77	S	5	2.2	.....	0	0	.....	.....	0	0	Clear	
Detroit, Mich.	.....	.....	30.25	768.3	20	— 6.7	70	NW	4	1.8	.....	8cs	0	N	.....	0	0	Fair	
Dodge City, Kan.	27.81	706.4	30.30	769.6	23	— 5.0	86	NE	2	0.9	.....	0	2s	.....	.....	0	0	Clear	
Dubuque, Iowa	.....	.....	30.41	772.4	22	— 5.6	72	Calm	0	0	.....	0	Haze	.....	.....	0	0	Clear	
Duluth, Minn.	.....	.....	30.18	766.6	20	— 1.7	78	SW	6	2.7	.....	5c	0	.....	.....	0	0	Fair	
Eastport, Me.	.....	.....	29.57	751.1	14	—10.0	82	NW	11	4.9	.....	0	5s	.....	NW	Inap.	Inap.	Fair	
Erie, Pa.	.....	.....	30.19	766.8	15	— 9.4	64	W	6	2.7	.....	1c	0	.....	.....	0	0	Clear	
Escanaba, Mich.	.....	.....	30.24	768.1	11	—11.7	61	SW	5	2.2	.....	5cs	0	SW	.....	0	0	Fair	
Fort Gibson, Indian Ter.	.....	.....	30.47	773.9	32	0.0	79	N	9	4.0	.....	0	0	.....	.....	0	0	Clear	
Ft. St. Michael, Alaska	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Fort Sill, Indian Ter.	29.27	743.4	30.46	773.7	35	1.7	69	N	16	7.2	.....	8k	0	NW	.....	0	0	Cloudy	
Fort Sully, Dakota	28.45	722.6	30.18	766.6	33	0.6	79	SE	9	4.0	.....	0	0	.....	.....	0	0	Clear	
Florence, Arizona	28.64	727.4	30.18	766.6	55	12.8	.....	SE	.....	.....	.....	0	0	.....	.....	0	0	Clear	
Galveston, Tex.	.....	.....	30.28	769.1	53	11.7	60	N	23	10.3	.....	8cs	0	.....	.....	0	0	Cloudy	
Grand Haven, Mich.	.....	.....	30.33	770.4	20	— 6 7	78	Calm	0	0	.....	0	4s	.....	.....	0	0	Fair	
Indianapolis, Ind.	.....	.....	30.37	771.4	22	— 5.6	72	NW	6	2.7	.....	0	0	.....	.....	0	0	Clear	
Indianola, Tex.	.....	.....	30.29	769.4	54	12.2	86	N	20	8.9	.....	10cs	0	.....	.....	0	0	Cloudy	
Jacksonville, Fla.	.....	.....	29.92	760.0	59	15.0	76	W	4	1.8	.....	10k	0	W	.....	0	0	Cloudy	
Keokuk, Iowa	.....	.....	30.42	772.7	27	— 2.8	77	NW	10	4.5	.....	0	0	.....	.....	0	0	Clear	
Key West, Fla.	.....	.....	30.10	764.5	64	17.8	83	SE	8	3.6	.....	0	0	.....	.....	0	0	Clear	
Kittyhawk, N. C.	.....	.....	30.00	762.0	32	0.0	60	N	40	17.9	.....	0	8ks	.....	W	0	0	Cloudy	
Knoxville, Tenn.	.....	.....	30.26	768.6	27	— 2.8	54	N	10	4.5	.....	0	0	.....	.....	0	0	Clear	
La Crosse, Wis.	.....	.....	30.35	770.9	24	— 4.4	74	S	9	4.0	.....	5c	0	SW	.....	0	0	Fair	
Leavenworth, Kan.	.....	.....	30.50	774.7	27	— 2.5	88	N	3	1.3	.....	0	0	.....	.....	0	0	Clear	
Louisville, Ky.	.....	.....	30.34	770.6	26	— 3.3	75	NW	12	5.4	.....	0	0	.....	.....	Inap.	Inap.	Clear	
Lynchburg, Va.	.....	.....	30.08	764.0	28	— 2.2	48	NW	8	3.6	.....	0	0	.....	.....	0	0	Clear	
Malone, N. Y.	.....	.....	29.88	758.9	16	— 8.9	75	NW	11	4.9	.....	.....	10s	.....	NW	0.02	0.5	Cloudy	
Marquette, Mich.	.....	.....	30.10	764.5	28	— 2.2	67	W	4	1.8	.....	.....	10s	.....	.....	0	0	Cloudy	
Memphis, Tenn.	.....	.....	30.40	772.1	32	0.0	81	N	12	5.4	.....	0	0	.....	.....	Inap.	Inap.	Clear	
Milwaukee, Wis.	.....	.....	30.39	771.9	22	— 5.6	72	W	5	2.2	.....	5c	0	.....	.....	0	0	Fair	
Mobile Ala.	.....	.....	30.21	767.3	43	6.1	66	N	20	8.9	.....	5k	2s	N	N	0	0	Cloudy	
Montgomery, Ala.	.....	.....	30.19	766.8	42.5	5.8	70	NW	14	6.3	.....	0	0	.....	.....	0.13	3.3	Clear	
Morgantown, W. Va.	29.10	739.1	30.22	767.6	25	— 3.9	48	N	2	0.9	.....	0	0	.....	.....	0.01	0.3	Clear	
Mt. Washington, N. H.	23.03	585.0	29.39	746.5	— 9	—22.5	100	N	54	24.1	.....	.....	Fog	.....	.....	0.05	1.3	Foggy	
Nashville, Tenn.	.....	.....	30.34	770.6	30	— 1.1	68	N	3	1.3	.....	0	0	.....	.....	0	0	Clear	
New Haven, Conn.	.....	.....	29.89	759.2	22	— 5.6	72	NW	2	0.9	.....	5ck	0	NW	.....	0	0	Fair	
New London, Conn.	.....	.....	29.88	758.9	19	— 7.2	54	NW	3	1.3	.....	5k	2s	NW	.....	0	0	Fair	
New Orleans, La.	.....	.....	30.20	767.1	50.5	10.3	55	N	18	8.0	.....	7c	0	W	.....	Inap	Inap.	Fair	
Newport, R. I.	.....	.....	29.85	758.2	18	— 7.8	67	NW	12	5.4	.....	10c	0	NW	.....	0	0	Cloudy	
New York, N. Y.	.....	.....	29.94	760.5	22	— 5.6	59	NW	11	4.9	.....	2cs	0	NW	.....	0.06	1.5	Clear	
Norfolk, Va.	.....	.....	30.04	763.0	30	— 1.1	59	N	5	2.2	.....	0	0	.....	.....	0	0	Clear	
North Platte, Neb.	27.36	694.9	30.10	764.5	26	— 3.3	89	W	11	4.9	.....	0	0	.....	.....	0	0	Clear	
Omaha, Neb.	29.28	743.7	30.45	773.4	25	— 3.9	75	SW	3	1.3	.....	0	0	.....	.....	0	0	Clear	
Oswego, N. Y.	.....	.....	30.02	762.5	21.2	— 6.0	78	NW	12	5.4	.....	5cs	2ks	NE	NW	0	0	Fair	
Pembina, Dakota	.....	.....	30.00	762.0	23	— 5.0	86	S	10	4.5	.....	0	0	.....	.....	0	0	Clear	
Philadelphia, Pa.	.....	.....	30.00	762.0	24	— 4.4	74	NW	12	5.4	.....	1cs	1s	NW	.....	0.03	0.8	Fair	
Pike's Peak, Col.	17.86	453.6	30.07	763.8	8	—13.3	33	SW	14	6.3	.....	Haze	0	.....	.....	0	0	Clear	
Pittsburgh, Pa.	.....	.....	30.19	766.8	20	— 6.7	77	NW	7	3.1	.....	0	0	.....	.....	0.06	1.5	Clear	
Port Huron, Mich.	.....	.....	30.23	767.8	16	— 8.9	83	NW	5	2.2	.....	2cs	0	NE	.....	0	0	Clear	
Portland, Me.	.....	.....	29.71	754.6	19	— 7.2	69	NW	3	1.3	.....	2c	5ks	NW	NW	Inap.	Inap.	Fair	
Portland, Oregon	.....	.....	29.96	761.0	50	10.0	93	Calm	0	0	.....	.....	10n	.....	.....	1.32	33.5	Light rain	
Punta Rassa, Fla.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Rochester, N. Y.	.....	.....	30.05	763.3	20.5	— 6.4	78	NW	7	3.1	.....	1c	Haze	.....	.....	Inap.	Inap.	Clear	
Salt Lake City, Utah	25.93	658.6	30.26	768.6	32	0.0	79	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Sandy Hook, N. J.	.....	.....	29.94	760.5	23	— 5.0	73	NW	16	7.2	.....	8ck	0	W	.....	0.11	2.8	Cloudy	
San Diego, Cal.	.....	.....	30.24	768.1	53	11.7	59	NE	3	1.3	.....	0	0	.....	.....	0	0	Clear	
San Francisco, Cal.	.....	.....	30.26	768.6	57	13.9	87	SW	6	2.7	.....	Haze	0s	.....	.....	0	0	Fair	
Santa Fé, N. M.	23.49	596.6	30.03	762.7	28	— 2.2	43	NE	3	1.3	.....	0	0	.....	.....	0	0	Clear	
Savannah, Ga.	.....	.....	29.88	758.9	53	11.7	89	NW	7	3.1	.....	.....	10n	.....	NW	nap.	Inap.	Light rain	
Shreveport, La.	.....	.....	30.46	773.7	42	5.6	66	N	6	2.7	.....	Haz	Sm'e	.....	.....	0	0	Hazy	
Smithville, N. C.	.....	.....	29.98	760.2	40	4.4	58	NW	12	5.4	.....	.....	10s	.....	N	0	0	Cloudy	
Springfield, Mass.	.....	.....	29.87	758.7	21	— 6.1	55	NW	3	1.3	.....	1c	0	NW	.....	0	0	Clear	
St. Louis, Mo.	.....	.....	30.49	774.4	28	— 2.2	65	N	4	1.8	.....	0	0	.....	.....	0	0	Clear	
St. Marks, Fla.	.....	.....	30.00	762.0	56	13.3	73	NW	15	6.7	.....	.....	10s	.....	NW	0	0	Cloudy	
St. Paul, Minn.	.....	.....	30.26	768.3	25	— 3.9	88	SW	4	1.8	.....	1c	0	.....	.....	0	0	Clear	
St. Paul's Island, Alaska	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Thatcher's Island, Mass.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Toledo, Ohio.	.....	.....	29.77	756.1	21	— 6.1	57	NW	24	10.7	.....	1ck	0	NW	.....	0	0	Clear	
Tucson, Arizona	.....	.....	30.30	769.6	19	— 7.2	69	N	8	3.7	.....	2cs	Haze	NW	.....	0	0	Clear	
Tybee Island, Ga.	27.74	704.6	30.29	769.4	38	3.3	.....	S	.....	.....	.....	0	0	.....	.....	0	0	Clear	
Vicksburg, Miss.	.....	.....	29.84	757.9	50	10.0	86	NW	4	1.8	.....	.....	10n	.....	NE	0.03	0.8	Light rain	
Virginia City, M. T.	.....	.....	30.38	771.6	30	3.9	71	N	6	2.7	.....	2cs	0	.....	.....	0.14	3.6	Clear	
Washington, D. C.	24.37	619.0	29.85	758.2	30	— 1.1	68	SE	4	1.8	.....	8k	0	.....	.....	0	0	Cloudy	
Wilmington, N. C.	.....	.....	30.09	764.3	23	— 5.0	60	NW	16	7.2	.....	0	0	.....	.....	Inap	Inap.	Clear	
	.....	.....	29.98	761.5	40	4.4	48	NE	11	4.9	.....	10cs	0	SW	.....	0.08	2.0	Cloudy	

UNITED STATES SERIES.—CONTINUED.

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Wood's Holl, Mass.	.....	.....	29.85	758.2	21	— 6.1	58	NW	12	5.4	.....	8cs	0	NW	.....	0	0	Cloudy.	
Yankton, Dakota	29.04	737.6	30.42	772.7	27	— 2.8	76	S	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Yuma, Arizona	.....	.....	30.21	767.3	61	16.1	.....	N	.....	.....	.....	0	0	.....	.....	0	0	Clear	
SUB-SERIES.																			
Kingston, Jamaica, W. I.	.....	.....	30.21	767.3	74	23.3	72	N	7	3.1	.....	5c	0	.....	.....	0	0	.....	James Gall.
Navassa, W. I.	.....	.....	.....	.....	78	25.6	.....	NNE	.....	.....	3	.....	.....	.....	.....	0	0	.....	Dr. G. H. Davison.
Clifton, Ja., W. I.	27.22	691.4	30.04	763.0	67	16.1	81	N	0.5	0.2	.....	2c	0	N	.....	0	0	Fine	C. Partridge.
Paramaribo, D. Guiana, S.A	.....	.....	30.08	764.0	78	25.6	82	NE	.....	.....	2	0	5k	.....	.....	0	0	Clear	C. J. Hering.
Batavia, Dutch Guiana, S.A.	30.11	764.8	.....	.....	77.9	25.5	.....	N	.....	.....	.....	.....	.....	.....	.....	0	0	Fair	Dr. H. Groot.
Medellin, Colombia, S. A.	25.24	641.1	.....	.....	66.0	18.9	84	Calm	.....	.....	0	2cs	5ks	.....	.....	0.02	0.5	Cloudy	Thomas Herran.
York Factory, B. A.	.....	.....	29.77	756.1	12.0	—11.1	90	S	4	1.8	.....	3k	0	N	.....	0	0	Fair	J. Fortescue, W. Wood
Honolulu, Oahu, H. I.	.....	.....	29.96	761.0	73	22.8	95	SW	.....	.....	8	.....	.....	.....	.....	0.25	6.3	Squally	Daniel Smith.
Makawao, Maui, H. I.	.....	.....	29.88	758.9	63	17.2	88	S	.....	.....	4	0	10n	.....	.....	0.70	17.8	Squally	F. L. Clarke.

NOTE.—The originals give the amount of cloudiness by the scale 0 to 4, except York Factory, Makawao, Medellin and Paramaribo. The elevation of the barometer at Bismarck is 1,677 feet, or 511.1 meters; Cheyenne, 6,057.3 ft., or 1,846.2 m.; Clifton, about 2,592 ft., or 881.5 m.; Denver, 5,185 ft., or 1,565.2 m.; Dodge City, 2486ft., or 757.5 m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Florence, 1,550 (?) ft., or 472.5 (?) m.; Makawao, 2,207 ft., or 672.1 m.; Morgantown, 1,027.9 ft., or 313.3 m.; Medellin, 4,876 ft., or 1,486.2 m.; Mt. Washington, 6,285 ft., or 1,915.6 m.; North Platte, 2,846 ft., or 867.4 m.; Omaha, 1,054.6 ft., or 321.4 m.; Pike's Peak, 14,160.7 ft., or 4,313.1 m.; Salt Lake City, 4,362.2 ft., or 1,329.6 m.; Santa Fé, 6,862.2 (?) ft., or 2,091.6 (?) m.; Tucson, 2,545 (?) ft., or 775.7 (?) m.; Virginia City, 5,480 (?) ft., or 1,670.3 (?) m.; Yankton, 1,278 ft., or 389.5 m. The following constants are added in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Denver, 5.22 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fé, 6.54 in.; Tucson, 2.59 in.; Virginia City, 5.48 in. The elevation of Batavia is about 6 feet; the barometric readings need the addition of 0.2 mm. or 0.01 in. for reduction to sea-level.

UNITED STATES NAVAL SERIES.

By authority of the **SECRETARY OF THE NAVY.**

Furnished by the coöperation of the Navy Department, through Commodore Daniel Ammen, U. S. N., Chief of Bureau of Navigation.

STATIONS AND VESSELS.	True course toward—	Hourly rate in knots.	*Barometer as reported.		Temperature of the Air.		Relative Humidity.	Wind.				Clouds.				Rain-fall or melted snow in the past 24 hours.		State of Ocean.	Direction of swell from—	Weather.	Observer.
								Direction.	Velocity		Force.	Amount.		Direction.							
												Up'er	Low'r	Up'er	Low'r						
			Inches.	Millimeters.	Fahrenheit.	Centigrade.	Per cent.	From—	Miles per hour.	Meters per second.	0—10.	0—10.		From—	From—	Inches.	Millimeters.				
Naval Academy, Annapolis, Md.			29.69	754.1	24	— 4.4	74	NW			5		2		NW	0	0			Clear	
Naval Hospital, Annapolis, Md.			30.05	763.3	23	— 5.0	60	NW			2		2			0	0			Fair	
Navy Yard, Mare Island, Cal.			30.31	769.9	57.5	14.2		SSE			2		2			0	0			Clear	
Navy Yard, Norfolk, Va.			30.10†	764.5†	32	0.0	90	N	8	3.6			1cs			0	0			‡D. clouds	
Navy Yard, Pensacola, Fla.			30.20	767.1	50	10.0		NNW			4		9		S	0	0			‡D. clouds	
Navy Yard, Portsmouth, N.H.			29.71	754.6	17	— 8.3		NW	13	5.8					S&E	0	0			Clear	
¶ Canonicus, New Orleans, La.			30.15	765.8	50	10.0	93	N			4		5		E					Fair	
Colorado, New York, N. Y.			29.98	761.5	23	— 5.0		WNW	6				4		E	§0.50	§12.7			‡D. clouds	
Essex, N. 19°, 50′, W. 96°, 56′			30.18	766.6	74	23.3	95	SW			3		6		NE			Smooth		‡D. clouds	
¶ Gettysburg, Menton, France			29.70	754.4	56	13.5		SSW			6		8		SW			Moderate	SW	Squally	
Hartford, Hampton Roads, Va.			30.14	765.5	29	— 1.7		NNW			3		1			0	0			Pleasant	
Lackawana, Mare Island, Cal.			30.25	768.3	60	15.6	88	SSE			1		1					Smooth		‡D. clouds	
Marion, Port Said, Egypt			29.97	761.2	62	16.7	94	ENE			3		9		NE			Smooth		‡D. clouds	
Michigan, Erie, Pa.			29.64	752.8	13	—10.6	62	WSW			1		2		WSW					Clear	
Monongahela, Baltimore, Md.			29.98	761.5	24	— 4.4		NW			1		s,n							‡D. clouds	
New Hampshire, Port Royal, S. C.			30.06	763.5	52	11.1		E			4–6		10							Drizzling	
Omaha, Panama			30.10	764.5	77	25.0	86	WNW			3		7		W	0	0	Smooth		Cloudy	
Ossipee, Pensacola, Fla.			30.17	766.3	51	10.6		NNW			5		8		NNW					Hazy	
Pensacola, Panama			30.09	764.3	78	25.6	91	NW			1		9		S	0	0			Pleasant	
Plymouth, New Orleans, La.			30.20	767.1	50	10.0	72	N			5		4		W					Clear	
Ranger, Hampton, Roads, Va.			30.11	764.8	30.5	— 0.8		NW			5–6		1					Moderate	SE	Clear	
¶ Rio Bravo, Matamoras, Mex.			29.07	763.5	60	15.6		NW			1		10		N					Raining	
Santee, Annapolis, Md.			30.11	764.8	27	— 2.8		NW			5		2		NW					Clear	
St. Louis, League Island, Pa.			29.80	758.4	38	3.3		NW	8	3.6			0			0.96	1.5			Clear	
Vandalia, Constantinople, Turkey.			30.16	766.1	49	9.4	93	NNE			2		10							Raining	
Wabash, Boston, Mass.			29.82	757.4	19	— 7.2		NW	11	4.9			5		SE	0	0			Hazy	
Wyoming, Washington, D.C.			30.08	764.0	24	— 4.4		NW			4		1								

* It is not known that the barometer is corrected for temperature, instrumental error or elevation. † Aneroid Barometer. ‡ Detached clouds. ¶ Barometer corrected for instrumental error and reduced to sea-level. § Unmelted snow?

UNITED STATES MARINE SERIES

REPORTED TO THE OFFICE OF THE CHIEF SIGNAL OFFICER OF THE ARMY.

NAMES OF VESSELS.	True course toward—	Hourly rate in knots.	Barometer reduced to sea-level.		Temperature of the Air.		Relative Humidity.	Wind.				Clouds.				State of Ocean.	Direction of swell from—	Weather.	Observer.
								Direction.	Velocity.		Force.	Amount.		Direction.					
												Up'er	Low'r	Upper.	Lower.				
			Inches.	Millimeters.	Fahrenheit.	Centigrade.	Per cent.	From—	Miles per hour.	Meters per second.	0—10.	0—10.	0—10.	From—	From—				
PACIFIC MAIL S. S. CO. MARINE SERIES. Furnished by the coöperation of ————, President; Williams, Blanchard & Co., Agents.																			
S. S. City of Peking																			Lt. Z. L. Tanner, U.S.N
OCCIDENTAL AND ORIENTAL S. S. CO. MARINE SERIES. Furnished by the coöperation of George H. Bradbury, President; T. H. Goodman, Agent.																			
S. S. Belgic																			Capt. John Metcalf.
S. S. Gaelic																			Capt. W. H. Kidley.
S. S. Oceanic																			Capt. H. Parsell.
NORTH GERMAN LLOYD OF BREMEN MARINE SERIES. Furnished by the coöperation of A. Schumacher & Co., Agents.																			
S. S. Baltimore																			Capt. H. Andressen.
S. S. Berlin																			Capt. C. Pohle.
S. S. Braunschweig																			Capt. K. Undütsch.
S. S. Nürnberg																			Capt. A. Jaeger.
S. S. Ohio																			Capt. G. Meyer.
MARINE SERIES. (Miscellaneous.) Furnished by the coöperation of the Observer named.																			
Schooner Addie Fuller N. 34°, 57', W. 74°, 48'	E	2	29.86	758.4	49	9.4	93	N	20	8.9			10d		N	Heavy sea.		Overcast	Capt. James Jorgensen

NOTE.—The schooner Addie Fuller gives the amount of cloudiness by the scale 0 to 4.

COLLATED AT THE OFFICE OF THE CHIEF SIGNAL OFFICER OF THE ARMY, WASHINGTON, D. C.

The records which appear in this Bulletin are copied from the regular exchanges of this office, made in each instance in compliance with an especial request and are published for the uses of the coöperating observers. The barometric readings in the first two columns are reduced to freezing and their respective standards; those in the second two also to mean sea-level. The "weather" is generally published as given.

When the distinction between the upper and lower strata of clouds is not reported, the *kinds* or *types*, viz: cirrus, cumulus, stratus, nimbus, scud, fracto, pallio, haze, fog and smoke, as indicated, respectively, by the letters c, k, s, n, d, f, p, hz., fg. and sm'e, are generally published with the amount in the lower-cloud column. The distinction between the upper and lower strata is carefully made in the United States Series and a portion of the Canadian Series, and the types are indicated by the above letters or their combinations in the proper column.

Albert J. Myer

Brig. Gen. (Bvt. Assg^d.,) Chief Signal Officer, U. S. A.

BULLETIN

OF

INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON FEBRUARY 21, 1877.

7:35 A. M. WASHINGTON mean time.

6:7 A. M. MEXICO mean time.
7:7 A. M. SAN JOSE mean time.
0:6 P. M. LISBON mean time.
0:28 P. M. MADRID mean time.
0:43 P. M. GREENWICH mean time.
0:53 P. M. PARIS mean time.
1:1 P. M. BRUSSELS mean time.
1:4 P. M. UTRECHT mean time.
1:13 P. M. BERNE mean time.
1:26 P. M. CHRISTIANIA mean time.

1:33 P. M. COPENHAGEN mean time.
1:33 P. M. ROME mean time.
1:37 P. M. BERLIN mean time.
1:49 P. M. VIENNA mean time.
1:55 P. M. STOCKHOLM mean time.
2:18 P. M. ATHENS mean time.
2:39 P. M. CONSTANTINOPLE mean time.
2:44 P. M. ST. PETERSBURG mean time.
6:36 P. M. CALCUTTA mean time.
10:2 P. M. TOKEI mean time.

ALGERIAN SERIES.

Furnished by the coöperation of General d'Eudeville, Commandant Supérieur du Génie in Algeria.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Nemours			29.99	761.8	66.4	19.1		NW			2		2			0.039	1.0	Clear	Michel.
Algiers			29.85	758.1	58.6	14.8		W			1		3			0.016	0.4	Fair	Biscarrat.
La Calle			29.77	756.2	59.0	15.0		NW			3		4			0.059	1 5	Fair	Fleury.
Tunis			29.84	757.9	59.0	15.0		NW			4		2			0.079	2.0	Clear	Jacques.
Sfax																			
Saida			29.97	761.1	51.8	11.0		WNW			4		7			Inap.	Inap	Cloudy	Millot.
Tebessa			29.83	757.6	50.4	10.2		NW			3		6			0	0	Fair	Bourgeois.
Geriville			29.93	760.1	44.6	7.0		N			5		6			0	0	Fair	Lemaillot.
Laghouat			29.93	760.2	56.3	13 5		N			6		6			0	0	Fair	Guyot.
Biskra			29.90	759.5	64.0	18.1		NW			5		6			0	0	Fair	Kuntz.

NOTE.—In the originals the distinction between the amount of upper and lower clouds is apparently not made. The weather is published as given. The rain-fall is measured at 7 a. m., local time.

AUSTRIAN SERIES.

Furnished by the cooperation of Professor Dr. Julius Hann, Director of the Imperial and Royal Central Meteorological Institute at Vienna.

Agram			29.25	745.6	39.7	4.3	92	SW			1		10			0.197	5.0	Raining	Prof. Ivan Stosir.
Cracow, I. R. Observatory			29.46	748.3	38.5	3.6	85	W			1		10			0	0		Dr. Wierzbicki.
Eperies			29.48	748.9	38.3	3.5	85	Calm			0		10			0	0		Julius Mikolik.
Gratz	28.14	714.8	29.41	747.1	36.3	2.4	97	NW			3		10			0.394	10.0		Andreas Rospini.
Hermannstadt	28.08	713.3	29.51	749.6	43.9	6.6	63	SE			6		9			0	0		Prof. Reissenberger.
Kremsmünster	28.08	713.1	29.44	747.7	36.3	2.4	93	W			2		10			0.409	10.4		Prof. C. Wagner.
Lemberg			29.57	751.1	32.2	0.1	85	SE			2		10			0	0		Dr. T. Stanecki.
Nyiregyhaza																			Habzsuda Daniel.
Pola			29.34	745 1	44.6	7.0	77	ESE			1		10ks			0.101	2.57		I.R.Hydrographic Office.
Szegedin			29.40	746.7	47.3	8.5	88	S			4		8			0.211	5.35		Karl Stancel.
Trieste			29.37	746.0	48.6	8.9	86	W			1		10			0.098	2.5	Raining	Prof. V. Farolfi.
Vienna			29.44	747.8	36.3	2.4	94	Calm			0		10			0.228	5.8		I. R. Central Met. Obs'y.

NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 7 p. m., local time. The elevation of Gratz is 343.5 meters, or 1,126.9 feet; Hermannstadt, 467.8 meters, or 1,537.9 feet; Kremsmünster, 383.6 meters, or 1,258.5 feet.

BELGIAN SERIES.

Furnished by the cooperation of J. C. Houzeau, Director of the Royal Observatory at Brussels.

Arlon			29.61	752.0	34.7	1.5	92	NW			2		9			0.008	0.2	Snowing	Royal Observatory.
Brussels			29.61	752.1	43.3	6.3	67	NW			2		10k,n		N	0.081	2.05		
Furnes			29.66	753.3	40.5	4.7	85	NW			2		4			0.343	8.7		
Maescyck			29.55	750.6	40.3	4.6	72	N			4		10			0.008	0.2		

NOTE.—In the originals, the weather is occasionally given in general notes.

BRITISH SERIES

Furnished by the coöperation of Robert H. Scott, Esq., Director of the Meteorological Office, London, Alexander Buchan, Secretary of the Scottish Meteorological Society, Edinburgh, and the respective Observers.

STATIONS.	Barometer. Corrected for instrumental error and temperature. Inches.	Barometer. Corrected for instrumental error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Upper. 0—10.	Clouds. Amount. Lower. 0—10	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Aberdeen	.....	.....	29.94	760.5	39.1	3.9	.....	NNW	20	8.9	.....	.....	6	.....	.....	0.255	6.48	*D. clouds	William Boswell.
Ardrossan	.....	.....	30.00	762.0	41	5.0	.....	NNW	.....	.....	4	.....	1	.....	.....	.....	.....	Blue sky	William McNeil.
Armagh, Observatory	.....	.....	30.09	764.3	39.9	4.4	.....	NNW	17	7.6	.....	.....	5	.....	.....	.....	.....	*D. clouds	S. Call, for Dr. Robinson.
Bidston (Liverpool Obs.)	.....	.....	29.94	760.5	41.2	5.1	.....	NW	28	12.5	.....	.....	3	.....	.....	.....	.....	Blue sky	John Hartnup.
Birr Castle, (Parsonstown)	.....	.....	30.14	765.5	38.1	3.4	.....	N	.....	.....	1	.....	10	.....	.....	.....	.....	Drizzling	J. Dreyer.
Bradford	.....	.....	29.88	758.9	40.3	4.6	.....	N	.....	.....	2	.....	9	.....	.....	0	0	Blue sky	J. McLandsborough.
Bridgetown, (Barbados)	.....	.....	30.04	763.0	82.5	28.1	.....	NE	.....	.....	1	.....	7	.....	.....	.....	.....	*D. clouds	Sergt. J. F. Halanen, A.
Cambridge, Observatory	.....	.....	29.80	756.9	42.0	5.6	.....	N	.....	.....	4	.....	10	.....	.....	.....	.....	Squally	H. Todd. [H.C.
Cardington	.....	.....	29.83	757.7	42.0	5.6	.....	N	.....	.....	4	.....	7	.....	.....	.....	.....	*D. clouds	John McLaren.
Carlisle	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	T. Bell, for J. Cartmell.
Chatham, School M. E.	.....	.....	29.86	758.4	40.2	4.6	.....	N	.....	.....	3	.....	6	.....	.....	.....	.....	*D. clouds	Maj. C. N. Martin, R.E.
Dartmoor	28.46	722.9	30.02	762.5	35.6	2.0	.....	N	.....	.....	6	.....	6	.....	.....	.....	.....	Rain & snow	R. E. Power,
Davos Platz, (Switzerland)	24.24	615.7	.....	.....	24.8	— 4.0	57	NE	.....	.....	1	.....	10	.....	.....	0.091	2.31	Snowing	Francis Redford, M. A.
Donaghadee	.....	.....	30.04	763.0	40	4.4	.....	N	.....	.....	6	.....	8	.....	.....	.....	.....	*D. clouds	J. Mac Gowan.
Dover	.....	.....	29.71	754.6	42	5.6	.....	N	.....	.....	5	.....	5	.....	.....	.....	.....	Squally	J. Costello.
Eccles, (near Manchester)	.....	.....	29.90	759.4	39.4	4.1	.....	N	4.2	1.9	.....	.....	5	.....	.....	.....	.....	*D. clouds	Thomas Mackereth.
Falmouth, Observatory	.....	.....	30.04	762.7	42.3	5.7	.....	N	.....	.....	5	.....	9	.....	.....	.....	.....	Squally	The Staff.
Fort Napier, (Natal)	27.54	699.5	29.78	756.4	80.8	27.1	.....	W	.....	.....	4	.....	9	.....	.....	.....	.....	Overcast	P'vt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)	.....	.....	29.93	760.2	89	31.7	.....	N	.....	.....	1	.....	2	.....	.....	.....	.....	*D. clouds	
Galway, Queen's College	.....	.....	30.08	764.0	43	6.1	.....	NW	.....	.....	3	.....	8	.....	.....	.....	.....	*D. clouds	Prof. A. H. Curtis.
Gibraltar, (Mediterranean)	.....	.....	30.05	763.3	60.9	15.6	.....	W	.....	.....	5	.....	1	.....	.....	.....	.....	Blue sky	Corpl. C. Aitken, A.H.C.
Glasgow, Observatory	.....	.....	29.99	761.7	39.6	4.2	.....	W	.....	.....	1	.....	1	.....	.....	.....	.....	Blue sky	Lewis Stuart.
Great Yarmouth	.....	.....	29.71	754.6	42	5.6	.....	N	.....	.....	6	.....	7	.....	.....	.....	.....	Rain & hail	G. T. Watson.
Greenwich, Royal Obs'y	.....	.....	29.82	757.4	40.7	4.8	.....	N	.....	.....	4	.....	10	.....	.....	.....	.....	Overcast	The Staff, for G. B. Airy.
Guernsey	.....	.....	29.91	759.7	45	7.2	.....	NW	.....	.....	4	.....	7	.....	.....	.....	.....	*D. clouds	Dr. S. E. Hoskins.
Helston	.....	.....	30.04	763.0	45	7.2	.....	N	.....	.....	7	.....	6k	.....	.....	Blank	Blank	Fair	M. P. Moyle.
Holyhead	.....	.....	30.00	762.0	44	6.7	.....	N	.....	.....	6	.....	2	.....	.....	.....	.....	Blue sky	John Tilston.
Kew, Observatory	.....	.....	29.83	757.7	42.0	5.6	.....	NNW	17	7.6	.....	.....	0	.....	.....	.....	.....	Threatening	The Staff.
Kingstown	.....	.....	30.08	764.0	41	5.0	.....	NW	.....	.....	6	.....	7	.....	.....	.....	.....	*D. clouds	George Mitchell.
Leicester Museum	.....	.....	29.86	758.4	40.7	4.8	.....	NW	.....	.....	4	.....	10	.....	.....	.....	.....	Overcast	Wm. J. Harrison, F.G.S.
Malta, (Mediterranean)	.....	.....	29.98	761.5	55.4	13.0	.....	N	.....	.....	2	.....	6k	.....	.....	.....	.....	*D. clouds	Corp'l. P. Bravis, A.H.C.
Nairn	.....	.....	30.00	762.0	37	2.8	.....	NW	.....	.....	4	.....	8	.....	.....	.....	.....	¾ clouded	W. D. Penny.
Nassau, (Bahamas)	.....	.....	30.09	764.3	66.2	19.0	.....	NW	.....	.....	2	.....	4	.....	.....	.....	.....	*D. clouds	Surg. Maj. Henry.
Nottingham, Observatory	.....	.....	29.88	758.9	41.5	5.3	.....	NNW	.....	.....	4	.....	8k	.....	NNW	0	0	*D. clouds	E. J. Lowe, F. R. S.
Oscott, St. Mary's College	.....	.....	29.90	759.4	39.6	3.9	.....	NNW	.....	.....	4	.....	9	.....	.....	.....	.....	*D. clouds	Rev. Stephen Whitty.
Oxford, Radcliffe Obs'y	.....	.....	29.87	758.7	42	5.6	.....	NNW	.....	.....	4	.....	8	.....	.....	.....	.....	Overcast	J. Lucas.
Plymouth	.....	.....	29.98	761.5	43	6.1	.....	N	.....	.....	3	.....	6	.....	.....	.....	.....	Sleeting	John Merrifield.
Roche's Point	.....	.....	30.13	765.3	44	6.7	.....	N	.....	.....	5	.....	5	.....	.....	.....	.....	Cloudy	W. Kennedy.
Saint Ann's Head	.....	.....	30.00	762.0	41	5.0	.....	N	.....	.....	6	.....	5	.....	.....	.....	.....	Rain & hail	John C. Walker.
Saint Helier, (Jersey)	.....	.....	29.90	759.4	46.8	8.2	.....	NE	.....	.....	5	.....	2	.....	.....	.....	.....	¼ clouded	A. P. Amy.
Sandwick Manse, (Orkneys)	.....	.....	30.00	762.0	35	1.7	.....	NNW	25	11.2	.....	.....	7	.....	.....	.....	.....	Showery	Rev. C. Clouston, LL. D.
Scarborough	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	F. Shaw.
Scutari Cemetery, (Turkey)	.....	.....	29.54	750.3	51.6	10.9	.....	NE	.....	.....	2	.....	6	.....	.....	Blank	Blank	*D. clouds	Sergt. W. H. Lyne.
Sheffield	.....	.....	29.87	758.7	41.3	5.2	.....	N	.....	.....	3	.....	6	.....	.....	0.017	0.43	*D. clouds	W. F. Cooper.
Silloth Rectory	.....	.....	29.95	760.7	43.2	6.2	88	NE	.....	.....	3	.....	3	.....	.....	0	0	*D. clouds	Rev. Francis Redford
Stonyhurst, Observatory	.....	.....	29.94	760.5	38.0	3.3	.....	N	.....	.....	1	.....	8	.....	.....	.....	.....	*D. clouds	Rev. S. J. Perry.
Stornoway, Lews C., (Hebr.)	.....	.....	30.09	764.3	35	1.7	.....	NNE	.....	.....	4	.....	10	.....	.....	.....	.....	Overcast	John Smith.
Stratfield Turgiss	.....	.....	29.85	758.2	43.0	6.1	.....	N	.....	.....	2	.....	7	.....	.....	.....	.....	Squally	Rev. Charles H. Griffith.
Thurso	.....	.....	29.97	761.2	37	2.8	.....	NNW	.....	.....	4	.....	7	.....	.....	.....	.....	Snowing	John Trotter.
Truro, Royal Institution	.....	.....	30.02	762.5	46	7.8	.....	NW	.....	.....	8	.....	6	.....	.....	.....	.....	*D. clouds	W. Newcombe.
Valencia, Observatory	.....	.....	30.19	766.8	46.2	7.9	.....	N	16	7.2	.....	.....	10	.....	.....	.....	.....	*D. clouds	The Staff.
SUB-SERIES.																			
Calf of Man, (Isle of Man)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Henry Mercer.
Cape Good Hope, Obs'y	.....	.....	29.95	760.7	82.8	28.2	40	WNW	7	3.1	.....	1	3	.....	.....	.....	.....	.....	The Staff, for E. J. Stone.
Hobart Town, (Tasmania)	.....	.....	29.84	757.9	67.0	19.4	88	S	.....	.....	1	.....	10kn	.....	.....	0.02	0.5	Hazy	Francis Abbott, F.R.A.S.
Leith, Restalrig Park	.....	.....	29.98	761.5	40.1	4.5	.....	N	.....	.....	3	.....	5k	.....	.....	0	0	Cloudy	Andrew Gibb.
Mauritius, Observatory	.....	.....	30.00	763.5	81.2	27.3	72	WSW	6.5	2.9	.....	0	7	.....	SSW	0	0	Fine	C. Meldrum.
Melbourne, Observatory	.....	.....	30.00	762.0	59.8	15.4	69	Calm	0	0	.....	.....	8	.....	.....	0	0	Dull	R. L. J. Ellery.
Monach L't-house, (Hebrides)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	J. Youngclause.
North Unst, (Shetland Is.)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Robert Burnet.

NOTE.—Generally, the originals do not give the relative humidity, rain-fall, or distinction between upper and lower clouds. The originals give the wind direction to 32 points and weather by the Beaufort notation. The originals give the barometer for Aberdeen, Cardington, Freetown, Galway, Oxford, St. Helier, Sandwick, Scarborough, Stonyhurst, Leith, Monach and North Unst as read off and the amount of cloudiness for Stornoway by the scale 0 to 4. The wind-force is given by the scale 0 to 12 in the official series; 0 to 6 in the sub-series; except in lbs. per square foot for Greenwich and Hobart Town. The rain-fall is measured at Aberdeen at 10 a. m.; Bradford, 9 a. m.; Hobart Town, 7:30 a. m.; Nottingham, 6 p. m.; Mauritius, 9 a. m., local time. The elevation of Dartmoor is 1,400 feet, or 426.7 meters; Davos Platz, 5,105? feet, or 1,556.6? meters; Fort Napier, 2,200 feet, or 670.6 meters. *Detached clouds.

By authority of the Minister of Foreign Affairs.

COSTA RICA SERIES.

Furnished by the coöperation of Senor Federico Maison, Director of the Central Office of Statistics and Meteorology.

San José	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

DANISH SERIES.

Furnished by the coöperation of Captain N. Hoffmeyer, Director of the Royal Danish Meteorological Institute at Copenhagen.

Copenhagen	.....	.....	29.40	746.8	33.3	0.7	98	NNE	.....	.....	4	.....	10	.....	.....	.....	.....	.....	.....
Faröe	.....	.....	29.53	750.1	35.8	2.1	78	N	.....	.....	6	.....	2	.....	.....	.....	.....	.....	.....
Godthaab, (Greenland)	.....	.....	29.76	755.8	30.0	— 1.1	.....	E	.....	.....	2	.....	10	.....	.....	.....	.....	.....	.....
Stykkisholm, (Iceland)	.....	.....	29.78	756.3	34.3	1.3	89	SW	.....	.....	6	.....	8	.....	.....	.....	.....	.....	.....
Thorshavn, (Faröe)	.....	.....	30.08	764.0	27.5	— 2.5	72	N	.....	.....	2	.....	2	.....	.....	.....	.....	.....	.....
Vestervig	.....	.....	29.57	751.1	32.0	0.0	92	NNE	.....	.....	4	.....	10	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—The originals give the wind-force by the scale 0 to 6; occasionally, weather by Vienna symbols; no distinction between the amount of upper and lower clouds.

FRENCH SERIES.

Furnished by the co operation of His Excellency, U. J. Le Verrier, Director of the Paris Observatory, and the respective Observers.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10	Clouds. Amount. Up'r 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather	Observer.
Alençon	.....	.....	29.84	757.9	46.4	8	75	NW	.....	.....	4	.....	5ck	.....	NW	0	0	Cloudy.....	Normal School.
Amiens	.....	.....	29.74	755 4	41.7	5.4	77	SW	.....	.....	3	.....	10	.....	.....	0	0	Covered	Normal School.
Avignon	.....	.....	29.55	750.5	46.8	8.2	48	N	.....	.....	6	.....	.....	.....	N	0.20	5.	.....	Normal School.
Bar-sur-Seine	.....	.....	29.67	753.6	38.3	3.5	83	N	.....	.....	2	.....	8n	.....	N	0.130	3.3	Very cloudy	C. Saillard.
Beaumette, (near Angers)	.....	.....	29.72	754.8	44.8	7.1	53	N	21.7	9.7	.....	.....	.....	.....	N	0.020	0.5	.....	Beaumette Observ'tory.
Beauvais	.....	.....	29.73	755.2	41.9	5.5	69	NNW	.....	.....	3	.....	10	.....	N	0.469	11.90	Covered	Normal School.
Besançon	.....	.....	29.64	752.9	38.1	3.4	83	NE	.....	.....	3	.....	8	.....	N	0.287	7.3	Very cloudy	Normal School.
Bourg en Bresse	.....	.....	29.70	754.4	39.9	4.4	74	NW	.....	.....	4	.....	5n	.....	S	0.322	8.2	Cloudy.....	Normal School.
Bourges	.....	.....	29.75	755.7	42.1	5.6	85	NNW	.....	.....	4	.....	5	.....	NW	0.134	3.4	Cloudy.....	Normal School.
Brest	.....	.....	29.95	760.7	46.6	8.1	53	NNW	.....	.....	5	.....	4	.....	NNW	0.030	0.75	Squally.....	Naval Observatory.
Carcassonne	.....	.....	29.72	755.0	41.9	5.5	84	W	.....	.....	2	.....	2	.....	E	0.12	3.	Slightly cl'dy	Normal School.
Caen	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Chartres	.....	.....	29.72	754.8	41.5	5.3	90	NNE	.....	.....	4	.....	8	.....	SSW	0	0	.....	Normal School.
Châlons-sur-Marne	.....	.....	29.64	752.9	42.3	5.7	70	N	.....	.....	6	.....	10kn	.....	S	0.087	2.2	Covered	Normal School.
Clermont	.....	.....	29.72	754.9	40.3	4.6	62	NW	.....	.....	3	.....	8	.....	N	0.185	4.7	.....	Puy de Dome Obs'y.
Commercy	.....	.....	29.60	751.8	38.8	3.8	87	WNW	.....	.....	6	.....	8kn	.....	NW	0.374	9.5	Very cloudy	Normal School.
Commune de Gréasque*	.....	.....	29.44	747.8	42.4	5.8	56	NW	.....	.....	6	.....	8	.....	NW	0.32	8.	.....	M. Kina.
Grenoble	.....	.....	29.64	752.9	33.4	0.8	96	N	.....	.....	1	.....	10	.....	.....	0.532	13.50	Snowing.....	Normal School.
La Roche-sur-Yon	.....	.....	29.88	758.9	45.0	7.2	93	N	.....	.....	2	.....	10	.....	.....	0.071	1.8	Covered	Normal School.
Le Mans	.....	.....	29.84	757.9	41.0	5	97	NE	.....	.....	6	.....	5	.....	NE	0.172	4.37	Cloudy.....	Normal School.
Lons-Le-Saulnier	.....	.....	29.59	751.5	38.7	3.7	80	S	.....	.....	2	.....	5	.....	.....	0.32	8.	Snowing.....	Normal School.
Lorient	.....	.....	29.99	761.7	45.0	7.2	49	NW	.....	.....	4	.....	5	.....	N	0.177	4.5	Cloudy.....	Naval Observatory.
Mâcon	.....	.....	29.69	754.2	39.0	3.9	97	WNW	.....	.....	6	.....	10	.....	.....	0.20	5.	Covered	Normal School.
Metz	.....	.....	29.62	752.4	39.4	4.1	84	WNW	.....	.....	4	.....	10n	.....	W	0.362	9.2	.....	M. Schuster.
Mirecourt	.....	.....	29.54	750.4	39.2	4	80	NE	.....	.....	4	.....	5	.....	SW	0	0	Partly cov'd	Normal School.
Nismes	.....	.....	29.56	750.8	46.8	8.2	67	NW	.....	.....	4	.....	..en	.....	N	0.04	1.	.....	Normal School.
Orleans	.....	.....	29.75	755.7	42.1	5.6	88	N	.....	.....	6	.....	5	.....	N	0.154	3.9	Cloudy.....	Normal School.
Paris, Observatory	.....	.....	29.73	755.1	41.5	5.3	50	NW	.....	.....	4	.....	8k	.....	NNW	0.076	1.94	Very cloudy	National Observatory.
Parthenay	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Privas	.....	.....	29.65	753.0	41.0	5	80	NW	.....	.....	6	.....	5	.....	NW	0	0	Cloudy.....	Normal School.
Rochefort, Observatory	.....	.....	29.90	759.5	49.3	9.6	64	NW	.....	.....	6	.....	5	.....	SE	0	0	¼ covered....	Naval Observatory.
Rouen	.....	.....	29.84	758.0	44.6	7.0	68	N	.....	.....	4	.....	5	.....	N	0.189	4.8	Cloudy.....	Normal School.
Saint Lo	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Turbes	28.79	731.2	29.90	759.5	40.3	4.6	90	W	.....	.....	6	.....	10	.....	.....	0 91	23.	Raining.....	Normal School.
Villefranche	.....	.....	29.67	753.5	44.2	6.8	77	NW	.....	.....	4	.....	5	.....	N	0.339	8.6	Cloudy.....	Normal School.
Sub-Series.																			
Fort de France, Martinique	.....	.....	29.89	759.2	74.1	23.4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	L'Abbé Marchési.
Marseilles	.....	.....	29.40	746.7	45.0	7.2	72	NW	.....	.....	8	.....	8	.....	.....	0.008	0.20	Covered	Marseilles Observatory.
Mont-Louis	24.47	621.6	29.79	756.6	23.9	— 4.5	85	N	7.4	3.33	.....	.....	10	.....	.....	0.86	21.9	Covered	—. Falguère.
Montsouris, Paris	.....	.....	29.71	754.5	41.5	5.3	69	NW	.....	.....	4	.....	7	.....	NW	0.028	0.7	.....	Montsouris Observatory
Perpignan	.....	.....	29.68	753.9	42.8	6.0	62	NW	37.3	16.66	.....	.....	2	.....	W	0.36	9.2	.....	Dr. Fines.
Pic du Midi, (Summit,) H. P.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. Baylac.
Pic du Midi, (Plantade,) H. P.	22.12	561.8	.....	.....	13.1	—10.5	.....	NNE	.....	.....	4	.....	10	.....	.....	3.260	82.8	Snowy.....	General de Nansouty.
Saint Maur, (near Paris)	.....	.....	29.71	754.7	42.8	6.0	66	NNW	.....	.....	2	.....	9	.....	.....	0.252	6.4	Very cloudy	E. Renou.
Toulouse	.....	.....	29.85	758.2	42.4	5.8	77	NW	.....	.....	6	.....	7	.....	.....	0.236	6.0	Raining	Toulouse Observatory.
Tours	.....	.....	29.80	757.0	43.5	6.4	64	NNW	.....	.....	3	.....	8	.....	N	0.389	9.7	.....	C. Marquet.
Versailles, (near Paris)	.....	.....	29.74	755.3	41.4	5.2	71	N	.....	.....	3	.....	9	.....	.....	0.072	1.84	Showery.....	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai)	.....	.....	30.18	766.5	45.5	7.5	93	ESE	5.6	2.5	.....	.....	6	.....	.....	0	0	.....	Marc Dechevrens, S. J.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—Generally, the originals give the wind-force by the scale 0 to 7; no distinction between upper and lower clouds, and, in the official series, the amount by the scale 0 to 4 the rain-fall as measured at 7, 8 or 9 a. m., local time; at Clermont, 9 a. m. of the following day: the weather in general terms as published. The elevation of Clermont is 388 meters, or 1,272.9 feet; Commune de Gréasque, 322 meters, or 1,056.4 feet; Turbes, 308 meters or 1,010 feet; Mont-Louis, 1,686.40 meters or 5,204.8 feet; Pic du Midi, (Summit,) 2,877 meters, or 9,439.1 feet; Pic du Midi, (Plantade,) 2,366 meters, or 7,762.6 feet. In correcting the Mont-Louis barometric observations for altitude, the constant 135. millimeters has been added. *Bouches-du-Rhône

GERMAN SERIES.

Furnished by the coöperation of Professor Dr. G. Neumayer, Director of the German Naval Observatory, Hamburg.

Bamberg	.....	.....	29.33	745.0	40.1	4.5	69	SW	.....	.....	4	.....	10	SW	.....	0.118	3.0	.....	Prof. T. Hoh
Berlin	.....	.....	29.44	747.8	46.2	7.9	64	S	.....	.....	1	.....	5	.....	.....	0.016	0.4	.....	Prof. Arndt.
Breslau	.....	.....	29.46	748.2	44.4	6.9	65	SE	.....	.....	3	.....	10	.....	.....	0	0	.....	Royal University Obs'y.
Carlsruhe	.....	.....	29.46	748.3	43.2	6.2	68	WNW	.....	.....	2	.....	9	.....	.....	0.287	7.3	.....	A. Sens.
Cassel	.....	.....	29.45	748.0	37.9	3.3	93	NNW	.....	.....	7	.....	8	WNW	.....	0.016	0.4	Snowing.....	Dr. H. Möhl.
Crefeld	.....	.....	29.51	749.6	40.1	4.5	80	NW	.....	.....	4	.....	8	.....	.....	0.16	4.	Rain & snow	Director Lose.
Emden	.....	.....	29.48	752.7	37.2	2.9	75	NE	.....	.....	3	.....	10	.....	.....	0.165	4.2	Rain & snow	Prof. Prestel.
Frankfort on the Main	.....	.....	29.50	749.4	43.3	6.3	56	NNW	.....	.....	2	.....	8	.....	.....	0.134	3.4	.....	Physical Society.
Friedrichshafen	28.08	713.2	29.54	750.3	36.9	2.7	80	WNW	.....	.....	9	.....	10	.....	.....	0.193	4.9	Rain & snow	M. Wilhelm.
Hamburg	.....	.....	29.41	747.0	36.0	2.2	93	N	.....	.....	5	.....	10	.....	.....	0.232	5.9	Rain & snow	Captain F. Hegemann.
Kiel	.....	.....	29.40	746.8	34.7	1.5	93	N	.....	.....	2	.....	10	.....	.....	0.461	11.7	.....	Prof. G. Karsten.
Königsberg, (Prussia)	.....	.....	29.53	750.0	38.5	3.6	82	SE	.....	.....	5	.....	5	.....	.....	0	0	.....	Prof. E. Luther.
Köslin	.....	.....	29.39	746.6	44.2	6.8	.....	S	.....	.....	2	.....	5	.....	.....	0	0	.....	H. Müller.
Leipsic	.....	.....	29.41	747.0	42.6	5.9	68	SW	.....	.....	2	.....	7	WSW	.....	Inap.	Inap.	Rain, graupel	Prof. Bruhns.
Memel	.....	.....	29.56	750.8	35.4	1.9	88	SE	.....	.....	3	.....	10ks	.....	.....	0.142	3.6	.....	Reinbrecht & Skalweit.
Münster	.....	.....	29.45	748.1	40.1	4.5	88	NE	.....	.....	2	.....	10	.....	.....	0.161	4.1	.....	Prof. E. Heis.
Neufahrwasser	.....	.....	29.49	749.1	40.8	4.9	82	S	.....	.....	2	.....	6	.....	.....	0	0	.....	A Lothe.
Posen	.....	.....	29.44	747.8	46.0	7.8	67	SW	.....	.....	1	.....	10	.....	.....	0	0	.....	Dr. Magener.
Strassburg, (in Alsace)	.....	.....	29.52	749.7	41.5	5.3	71	NNW	.....	.....	3	.....	10	NNW	.....	0.106	2.7	.....	Dr. Schur.
Stuttgart	.....	.....	29.45	748.1	38 3	3.5	75	W	.....	.....	1	.....	10	.....	.....	0.150	3.8	.....	Prof. Schoder.
Thorn	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Dr. Hasenbalg.
Treves, (Trier)	.....	.....	29.48	747.4	41.0	5.0	71	NW	.....	.....	6	.....	10	.....	.....	0.004	0.1	Hailing.....	Prof. Flesch.
Weissenburg, (Bavaria)	27.91	708.9	29.44	747.7	37.4	3.0	74	WSW	.....	.....	4	.....	10	W	.....	0.028	0.7	.....	Dr. von Bebber.
Wustrow, Naval School	.....	.....	29.45	748.0	39.2	4.0	85	ENE	.....	.....	2	.....	10	.....	.....	0.059	1.5	.....	E. F. Schütz.
German Naval Series.																			
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—The elevation of Friedrichshafen is 413.4 meters, or 1,356.3 feet; Weissenburg, 431 meters, or 1,414.0 ft. In the originals the distinction between the amount of upper and lower clouds is not made. It is not always certain that the remarks in the weather column refer to the moment of observation.

GREEK SERIES.

Furnished by the coöperation of Professor Dr. J. F. Julius Schmidt, Director of the Royal Observatory at Athens.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Athens			29.48	748 8	60.4	15.8		NW										Cloudy	

Note.—The originals give the barometer corrected, but not reduced to sea-level; occasionally the kind of clouds; the weather as published. They omit the humidity wind-force, amount of cloudiness and rain-fall.

INDIAN SERIES.

Furnished by the coöperation of H. F. Blanford, Meteorological Reporter to the Government of India.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Kurrachee																			
Deesa																			
Bombay																			
Poona																			
Lahore																			
Belgaum																			
Bangalore																			
Rorkee																			
Agra																			
Trichinopoly																			
Nagpur																			
Madras																			
Lucknow																			
Allahabad																			
Patna																			
Hazaribagh																			
Cuttack																			
Calcutta (Alipore)																			
Goalpara																			
Chittagong																			
Sibsagar																			
Rangoon																			
Jubbulpore																			

ITALIAN SERIES.

Furnished by the cooperation of His Excellency the Minister of Agriculture, Industry and Commerce, and the respective Observers.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Udine			29.34	745.1	46.8	8.2	71	SE	2.7	1.1			10			1.658	42.1		Prof. Giovanni Clodig.
Stelvio	21.46	545.2			10.4	—12.0		N			4		10			0.327	8.3		Signora Ernesta Manfredi.
Valdobbia	21.48	545.7			13.6	—10.2	66	W			4		6	NNE		0	0		Ab. Dom. Mongini.
Padua			29.32	744.8	43.0	6.1	72	S	5.6	2.5			3	S		0.48	12.3		Prof. Dott. Lorenzoni.
Vicenza			29.35	745.4	41.2	5.1	79	N	1.5	0.6			8	E		0.442	11.3		Conte Alm. Da Schio.
Verona			29.31	744.4	41.0	5.0	78	E			4		10			0	0		Dott. B. Bertoncelli.
Bergamo			29.32	744 6	40.3	4.6	74	E			4		9			0.559	14.2		Prof Trionfini Carlo.
Domodossola			29.35	745.6	47.5	8.8	23	N			6		4			0.058	1.5		Prof. Giuseppe Ulza.
Milan			29.33	744.9	44.8	7.1	78	ESE			2		5			0	0		Ab. Gio. Capelli
Pavia			29.32	744.8	43.3	6.3	76	S			2		10			0	0		Prof. Gio. Cantoni.
Moncalieri			29.34	745.3	45.7	7.6	52	NNW	0	0			3	N		0	0		Pro P. F. Denza.
Mondovi	27.41	696.2	29.35	745.5	45.1	7.5	17	NNW			4		5	NNE		0	0		Prof. F. C. Bruno.
Porto Maurizio			29.32	744.6	52.7	11.5	32	E			6		3			0.077	1.9		Prof. [illegible] Vassallo.
Genoa			29.30	744.3	53.8	12.1	26	N	4.9	2.2			4	N		0.010	0.4		Prof. G M. Garibaldi.
Piacenza			29.35	745.4	41.4	5.2	76	E	11.9	5.3			10			0.799	20.3		Dott. G. [illegible] anzi.
Parma			29.37	746.0	39.6	4.2	88	SW			2		10			0.480	12.2	Rain & snow	Prof. P. Pigorini.
Florence			29.35	745.4	46.8	8.2	79	E			2		10			0.150	3.8	Raining	Cav. F. Meucci.
Leghorn			29.30	744.2	52.3	11.3	47	NW	24.2	10.8			8			0	0		Prof. P. Monte.
Siena	28.10	713.8	29.34	745.1	46.9	8.3	61	S	3.1	1.4			4	S		0.228	5.6		Prof. L. Toscani.
Urbino	27.80	706 1	29.40	746.7	42.8	6.0	71	SW			2		2			0.197	5.0	Raining	Prof. P. Serpieri.
Pesaro			29.35	745.4	49.1	9.5	65	SW	19.2	8.6			4	SW		0	0		Prof. Luigi Guidi.
Ancona			29.36	745.7	52.5	11.4	41	SW			4		4	SW		0	0		Prof. F. De— Bosis.
Grosseto			29.34	745.2	53.8	12.1	42	SSE			2		6	S		0.102	2.6	Rain & hail	Avv. P. Ponticelli.
Rome			29.40	746.8	51.8	11.0	73	SW	12.7	5.6			10	SW		0.192	4.9	Rain & hail	Prof's. P. Secchi & L. Respighi
Naples, O. U.			29.45	748.0	58.1	14.8	41	WNW			2		5	W		0.840	21 5		Prof. L. Palmieri.
Lecce			29.48	748.7	51.8	11.0	77	NE	6.8	2.8			9	N		0.07	1.8	Raining	Prof. C. De—Giorgi.
Cosenza			29.57	751.1	51.6	10.9	63	SE	2.5	1.1			10			0.110	2.8	Raining	Prof. F. D. Conti.
Cagliari			29.38	746.2	49.1	9.7	77	SW			2		10	W		0.28	7.2	Rain & hail	Prof. A. Pacinotti.
Riposto, (Sicily)			29.50	749.3	58.3	14.6	67	E			2		5	S		0.16	4.1		Prof. F. Cailero.
Palermo			29.50	749.3	57.7	14.3	49	WSW	6.3	2.8			9	W		0.327	8.3		Prof. G. Cacchittore.
Caltanissetta	27.60	701.2	29.59	751.6	48.6	9.4	62	SW			4		5	SE		0	0		Prof. A. Pagani.
Siracusa			29.48	748.7	59.4	15.2	55	SW			4		7	SW		0.03	1.0	Light rain	Prof. V. Giuliano.
Sub-Series.																			
Naples, S. R.			29.49	749.1	53.4	12.0	48	NW	4.8	1.9			8	NE		0.390	9.9		Prof. F. Brioschi

Note.—The originals give the wind-force by the scale 0 to 4, or the velocity in kilometers per hour; generally, no distinction between upper and lower clouds occasionally the weather by the Vienna symbols. The elevation of Stelvio is 2,543.0 meters, or 8,342.9 feet; Valdobbia, 2,548.0 meters or 8,359.3 feet; Bergamo, 379.6 meters, or 1,24[illegible] 3 feet; Mondovi, 556 meters, or 1,824.2 feet; Siena, 348.5 meters, or 1,143.5 feet; Urbino, 451 meters, or 1,47[illegible].7 feet; Caltanissetta, 570.3 meters, or 1,871.0 feet.

JAPANESE SERIES.

Furnished by the coöperation of the Imperial University of Tokei, Japan.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Tokei																			Prof. P. V. Veeder.

Note.—The originals give the amount of cloudiness by the scale 0 to 4 without distinguishing between upper and lower clouds. The rain-fall is measured at 7 a. m., [illegible] cal time.

By authority of the SECRETARY OF PUBLIC WORKS.

MEXICAN SERIES.

Furnished by the coöperation of Senor Mariano Barcena, Director of the Central Meteorological Observatory in the City of Mexico.

STATIONS.	BAROMETER. Corrected for instrum'tal error and temperature. Inches.	BAROMETER. Corrected for instrum'tal error and temperature. Millimeters.	BAROMETER. Reduced to sea-level. Inches.	BAROMETER. Reduced to sea-level. Millimeters.	TEMPERATURE OF THE AIR. Fahrenheit.	TEMPERATURE OF THE AIR. Centigrade.	RELATIVE HUMIDITY. Per cent.	WIND. Direction. From—	WIND. Velocity. Miles per hour.	WIND. Velocity. Meters per second.	WIND. Force. 0—10.	CLOUDS. Amount. Up'er 0—10.	CLOUDS. Amount. Low'r 0—10.	CLOUDS. Direction. Up er. From—	CLOUDS. Direction. Lower. From—	RAIN-FALL OR MELTED SNOW IN THE PAST 24 HOURS. Inches.	RAIN-FALL OR MELTED SNOW IN THE PAST 24 HOURS. Millimeters.	WEATHER.	OBSERVER.
Mexico																			Mariano Barcena.
																			Vicente Reyes.
																			Miguel Perez.

NOTE.—The elevation of Mexico is 2,290 meters, or 7,512.9 feet. The rain-fall is measured at 6 a. m., local time. (Engineers in charge.)

NETHERLANDS' SERIES.

Furnished by the cooperation of Professor Buys Ballot, Director of the Royal Meteorological Institute of the Netherlands at Utrecht.

Flushing			29.66	753.4	42.8	6.0		NNE			5					0.209	5.3		
Groningen			29.50	749.4	38.3	3.5										0.622	15.8		
Helder			29.61	752.0	42.3	5.7		N			4					0.020	0.5		
Utrecht			29.56	750.7	43.0	6.1	62	NNW			5	5				0.094	2.4	Cloudy	

NOTE.—The originals give the wind-pressure in kilograms per square meter; for Utrecht, they give the weather as published, from which the amount of cloudiness is taken by the scale 0 to 4, without distinguishing between upper and lower clouds. It is assumed that the barometer readings have been reduced to sea-level.

NORWEGIAN SERIES.

Furnished by the cooperation of Professor H. Mohn, Director of the Royal Norwegian Meteorological Institute at Christiania.

Bergen			29.70	754.4	30.9	— 0.6	81	NNW	12.3	5.5		0				0	0		
Rrône			29.48	748.7	28.4	— 2.0	80	NNE	29.1	13		10						Snowing	
Christiania			29.63	752.7	18.0	— 7.8	72	SSW	1.8	0.8		1				0	0		
Tromsö			29.42	747.3	21.9	— 5.6	65	ENE	8.9	4		10				0.122	3.1		

NOTE.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols. The cloudiness and weather at Bergen refer to 2h., p. m., local time, instead of 1h., 4 min.

PORTUGUESE SERIES.

Furnished by the coöperation of J. C. de Brito Capello, Director of the Meteorological Observatory of the Infante Don Luiz at Lisbon.

Angra, (Azores)			30.47	774.0	58.1	14.5	84	E	18.1	8.1		6	W			0	0		Dr. J. A. Sampaio
Campo Major			30.07	763.8	57.4	14.1	41	NW	19.9	8.9		2				0	0		Dr. A. M. R. dos Santos.
Funchal, (Madeira)			30.26	768.7	64.6	18.1	45	E	11.2	5.0		5				0	0		Capt. D. A. de Cunha.
Lisbon			30.19	766.8	56.7	13.7	57	N	31.1	13.9		4				0.004	0.1		The Observatory.
Ponta Delgada, (Azores)			30.47	773.8	59.2	15.1	68	ESE	6.9	3.1		3				0	0		

NOTE.—The originals give the wind-velocity in kilometers per hour; occasionally, the weather by the Vienna symbols; the amount of cloudiness without distinguishing between upper and lower clouds; the barometer corrected but not reduced to sea-level. The rain-fall at Libson is measured at noon, instead of 0 h. 6 m., p. m.

RUSSIAN SERIES.

Furnished by the cooperation of Professor H. Wild, Director of the Imperial Central Physical Observatory of Russia, at St. Petersburg.

Warsaw			29.52	749.8	40.6	4.8	76	SE	11	5		8						Solar corona	Astronomical Obs.
Wilna			29.72	755.0	30.2	— 1.0	87	S	4	2		10							Astronomical Obs.
Dorpat			29.71	754.6	30.4	— 0.9	92	S	9	4		10						Light snow	Physical Cabinet.
St. Petersburg			29.71	754.7	28.9	— 1.7	94	S	16	7		10						Light snow	Central Physical Obs.
Kuopio			29.47	748.6	29.7	— 1.3	94	WSW	18	8		10						Snowing	Ch. Forsten.
Kieff			29.89	759.2	23.2	— 4.9	95	ESE	9	4		10						Snowing	Physical Cabinet.
Nikolaiev			29.89	759.2	31.1	— 0.5	92	SE	7	3		10							Kurdakof.
Kertch			29.91	759.6	42.4	5.8	81	ESE	11	5		2							Lagorio.
Moscow			30.21	767.3	16.9	— 8.4	70	S	11	5		3							Meteorological Obs.
Lugan			30.17	766.4	15.3	— 9.3	75	E	18	8		10							Meteorological Obs.
Archangel			29.52	749.8	24.4	— 4.2	91	SSW	34	15		10							Ogorodnikof.
Tiflis	28.64	727.5	30.10	764.4	44.4	6.9	61	Calm	0	0		7							Physical Observatory.
Astrakhan			30.32	770.2	20.1	— 6.6	84	E	9	4		10							Sebastianof.
Kasan			30.48	774.2	5.0	—15.0	62	S	13	6		4							Physical Cabinet.
Orenburg			29.78	756.3	32.9	0.5	90	E	13	6		10							Tschernischef.
Ekaterinburg	29.43	747.4	30.45	773.5	17.1	— 8.3	55	SW	7	3		10							Meteorogical Obs.
Nukuss			30.41	772.4	17.6	— 8.0	94	NE	4	2		0							
Kasaly																			Bobrof.
Tashkend	28.69	728.6	30.47	774.0	39.9	4.4	71	Calm	0	0		8							Michelson.
Barnaul			30.85	783.7	— 8.9	—22.7	80	SSW	9	4		10							Meteorological Obs.
Yeniseisk			30.22	767.6	— 3.5	—19.7	76	S	7	3		10						Snowing	Marks.
Irkutsk																			Usolzef.
Peking, (China)			29.98	761.6	36.7	2.6	62	Calm	0	0		4							Physical Observatory.
Nertchinsk																			Meteorological Obs.
Vladivostock																			
Nikolaievsk, on the Amoor																			

NOTE.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols; they omit the rain-fall. The elevation of Tiflis is 469 meters, or 1,541.8 feet; Ekaterinburg, 306.4? m., or 1,005.2? ft.; Tashkend, 494.2? m., or 1,621.3? ft.; Irkutsk, 392 m., or 1,286 ft.; Nertchinsk, 592.0? m., or 1,942.2? ft.

SPANISH SERIES.

Furnished by the cooperation of Antonio Aguilar, Director of the Royal Observatory at Madrid, and of Don Cecilio Pujazon, Captain R. N. Director of the Naval Observatory at San Fernando.

Madrid			29.95	760.7	53.6	12.0	41	N	6.0	2.67		0	4			0	0	Cloudy	Royal Observatory.
San Fernando			30.11	764.8	55.6	13.1	68	NW	14.1	6.3		0	6		NW	0	0		Naval Observatory.

NOTE.—The originals give the weather in general terms, as published; rain-fall for San Fernando from preceding to following midnight; wind-velocity for Madrid in kilometers per hour.

SWEDISH SERIES.

Furnished by the coöperation of Professor R. Rubenson, Director of the Royal Swedish Meteorological Institute, at Stockholm, and of Dr. H. H. Hildebrandsson, Chief of the Meteorological Division of the Upsala Observatory.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Haparanda	.....	.....	29.38	746.3	12.9	—10.6	86	N	.....	.....	2	.....	0	.....	.....	0.276	7.0	.....	
Umea	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Hernosand	.....	.....	29.53	750.1	25.9	— 3.4	91	NNW	.....	.....	2	.....	1	.....	.....	0	0	.....	
Stockholm	.....	.....	29.56	750.8	25.9	— 3.4	87	NNE	.....	.....	2	.....	10	.....	.....	0.098	2.5	.....	
Wisby	.....	.....	29.52	749.8	33.4	0.8	96	SE	.....	.....	4	.....	10	.....	.....	0.209	5.3	.....	
Sub-Series.																			
Upsala	.....	.....	29.58	751.4	21.6	— 5.8	93	NE	4.0	1.8	.....	.....	2	.....	SW	0.007	0.17	.....	Dr. Hildebrandsson.

Note.—The originals give the wind-force by the scale 0 to 6, and Upsala also velocity in meters per second; occasionally, the weather by the Vienna symbols, or in general terms; no distinction between the amount of upper and lower clouds. The rain-fall is measured at 8 a. m., local time.

SWISS SERIES.

Furnished by the coöperation of Professor R. Wolf, Director of the Observatory at Zurich, and of Professor E. Plantamour, Director of the Observatory at Geneva.

Geneva	28.15	715.1	29.64	752.9	33.8	1.0	92	SE	.....	.....	1	.....	10	.....	.....	0.201	5.1	Snowing.....	The Observatory.
Zurich	27.89	708.5	29.60	751.9	34.2	1.2	88	W	.....	.....	1	.....	10	.....	.....	0.197	5.0	Snowing.....	The Observatory.

Note.—For Geneva the corresponding departures from the normal values are: Barometer, —10.8 mm; Thermometer, —3.6 cent.; Relative Humidity, +23 per cent.

Note.—The rain-fall is measured at Zurich at 7 a. m. on the following day. The originals give the barometer corrected but not reduced to sea-level; the wind-force by the scale 0 to 4 for Zurich; the amount of cloudiness without distinguishing between upper and lower clouds, the weather in general terms. The elevation of Geneva is 408 meters, or 1,339 feet, and that of Zurich 470 meters, or 1,542 feet.

TURKISH SERIES.

Furnished by the cooperation of A. Coumbary, Effendi, Director of the Central Observatory at Constantinople, and of Professor C. V. A. Van Dyck, Superintendent of the Lee Observatory at Beirut.

Constantinople	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Fao, (Persian Gulf)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Salonica	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Valona	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Varna	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y	.....	.....	29.87	758.7	69.3	20.7	68	SW	.....	.....	3	.....	0	.....	.....	0	0	Hazy.....	Prof. C. V. A. Van Dyck

Note.—The originals give the wind-force by the scale 0 to 7, (except Beirut, by the scale 0 to 12, and Constantinople velocity in meters per second;) the weather in general terms as published; no distinction between upper and lower clouds, and, except Constantinople and Beirut, the amount by the scale 0 to 4. It is assumed that the barometer is reduced to sea-level.

CANADIAN SERIES.

Furnished by the cooperation of Professor G. T. Kingston, Director of the Magnetic Observatory at Toronto, and Superintendent of the Meteorological Office of the Dominion of Canada, and the respective Observers. Those marked with a star (*) are also telegraphed daily to the office of the Chief Signal Officer, U. S. Army.

Bathurst, N. B	.....	.....	29.62	752.3	4.5	—15.3	89	SW	3	1.3	.....	.....	0	.....	.....	.....	.....	.....	Hon. J. Ferguson.
Brockville, Ontario	.....	.....	29.66	753.4	26	— 3.3	.....	SW	1	0.4	.....	0	2s	.....	SW	0	0	Fair	W. R. Bigg.
*Chatham, N. B	.....	.....	29.64	752.8	—10	—23.3	100	Calm	0	0	.....	0	0	.....	.....	0.04	1.0	Clear	G. A. Blair.
Charlottetown, P. E. Island	.....	.....	29.70	754.4	9	—12.8	92	Calm	0	0	.....	0	0	.....	.....	0.350	8.89	Clear	H. J. Cundall, C. E.
Cornwall, Ontario	.....	.....	29.82	757.4	25.0	— 3.9	93	SW	.....	.....	1	2ck	0	NW	.....	0	0	Bright	James Smith, M. A.
Dalhousie, N. B	.....	.....	29.61	752.1	7.4	—13.7	100	NW	.....	.....	1	.....	.....	.....	.....	0	0	Overcast	H. A. Johnson.
Esquimault, B. C	.....	.....	30.19	766.8	46.3	7.9	92	N	.....	.....	.....	.....	10s	.....	.....	0	0	Cloudy	W. H. Bevis.
*Father Point, Quebec	.....	.....	29.55	750.6	16	— 8.9	77	S	3	1.3	.....	0	2s	.....	.....	0	0	Clear	J. McWilliams.
Fredericton, N. B	.....	.....	29.72	754.9	— 3.9	—19.9	100	Calm	0	0	.....	0	0	.....	.....	Inap.	Inap	Clear	Prof. Harrison.
*Fort Garry, Manitoba	.....	.....	29.56	750.8	30	— 1.1	94	SW	4	1.8	.....	2k	2ks	SW	SW	0	0	Fair	James Stewart.
Goderich, Ontario	.....	.....	29.80	756.9	30.5	— 0.8	81	SW	.....	.....	1	0	2s	.....	.....	0	0	Clear	H. J. Strang, M. A.
Granton, Ontario	28.66	728.0	29.81	757.2	27.2	— 2.7	.....	SW	.....	.....	1	0	0	.....	.....	0	0	Clear	James Grant.
*Halifax, N. S	.....	.....	29.70	754.4	14	—10.0	78	W	3	1.3	.....	0	0	.....	.....	0.010	0.25	Clear	F. Allison, M. A.
Hamilton, Ontario	.....	.....	29.79	756.7	32.2	0.1	74	W	.....	.....	1	4ck	0	.....	.....	0	0	Clear	G. Dickson.
Heart's Content, N. F	.....	.....	29.70	754.4	29	— 1.7	89	SW	.....	.....	1	0	0	.....	.....	0	0	Fine	E. Weedon.
*Kingston, Ontario	.....	.....	29.69	754.1	30	— 1.1	89	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	S. Woods, M. A.
*Montreal, Quebec	.....	.....	29.60	751.8	28	— 2.2	88	SW	20	8.9	.....	.....	8n	.....	W	Inap.	Inap.	Cloudy	C. H. McLeod, C. E.
*Ottawa, Ontario	.....	.....	29.64	752.8	17	— 8.3	75	S	4	1.8	.....	2cs	0	S	.....	0	0	Clear	J. B. Haney.
*Parry Sound, Ontario	.....	.....	29.67	753.6	13	—10.6	81	S	2	0.9	.....	0	0	.....	.....	0	0	Clear	Rev. R. Mosley.
Port Dover, Ontario	.....	.....	29.82	757.4	26	— 3.3	88	SW	6	2.7	.....	0	0	.....	.....	0	0	Clear	H. Morgan.
Port Hastings, N. S	.....	.....	29.66	753.4	29.9	— 1.2	.....	Calm	.....	.....	.....	.....	.....	.....	.....	0	0	Fine	Peter Grant.
Port Stanley, Ontario	.....	.....	29.89	759.2	33	0.6	83	W	8	3.6	.....	2ck	0	W	.....	0	0	Clear	M. Payne.
*Quebec, Quebec	.....	.....	29.61	752.1	19	— 7.2	77	Calm	0	0	.....	.....	10n	.....	.....	0	0	Cloudy	Capt. Ashe, R. N
*Rockliffe, Ontario	.....	.....	29.63	752.6	14	—10.0	95	NW	3	1.3	.....	0	0	.....	.....	0	0	Clear	
St. John, N. B	.....	.....	29.75	755.6	13	—10.6	81	Calm	0	0	.....	1ck	0	.....	.....	0	0	Clear	G. Murdoch, C. E.
*Saugeen, Ontario	.....	.....	29.68	753.9	32	0.0	90	SW	6	2.7	.....	2cs	0	.....	.....	0	0	Clear	K. Stewart.
Stayner, Ontario	.....	.....	29.64	752.8	36	2.2	58	NW	10	4.5	.....	0	0	.....	.....	0	0	Clear	R. J. Cole.
Stratford, Ontario	28.47	723.1	29.80	756.9	26.6	— 3.0	88	SW	12	5.4	.....	0	0	.....	.....	0	0	Fine	C. J. MacGregor, M. A.
*Sydney, C. B	.....	.....	29.72	754.9	12	—11.1	86	SW	1	0.4	.....	0	0	.....	.....	0	0	Clear	T. C. Hill.
*Toronto, Ontario	.....	.....	29.72	754.9	31	— 0.6	70	W	8	3.6	.....	0	0	.....	.....	0	0	Clear	Magnetic Observatory.
Woodstock, Ontario	.....	.....	29.80	756.9	27.5	— 2.5	87	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	J. Montgomery.
Sub-Series.																			
St. Johns, Newfoundland	.....	.....	29.80	756.9	31.0	— 0.6	.....	Calm	.....	.....	.....	.....	10n	.....	.....	0.30	7.6	Raining	John Delany.

Note.—The originals for Brockville, Charlottetown, Port Dover, Port Stanley, Stayner, St. Johns, N. F. and those telegraphed, give the amount of cloudiness by the scale 0 to 4. The elevation of Granton is 1,015 feet, or 309.4 m.; Stratford, 1,182 feet, or 360.3 m

UNITED STATES SERIES.

Furnished by the coöperation of Bvt. Brig. Gen. Albert J. Myer, Chief Signal Officer, U. S. Army.

STATIONS.	BAROMETER. Corrected for instrum'tal error and temperature. Inches.	BAROMETER. Corrected for instrum'tal error and temperature. Millimeters.	BAROMETER. Reduced to sea-level. Inches.	BAROMETER. Reduced to sea-level. Millimeters.	TEMPERATURE OF THE AIR. Fahrenheit.	TEMPERATURE OF THE AIR. Centigrade.	RELATIVE HUMIDITY. Per cent.	WIND. Direction. From—	WIND. Velocity. Miles per hour.	WIND. Velocity. Meters per second.	WIND. Force. 0—10.	CLOUDS. Amount. Upper. 0—10.	CLOUDS. Amount. Lower. 0—10	CLOUDS. Direction. Upper. From—	CLOUDS. Direction. Lower. From—	RAIN-FALL OR MELTED SNOW IN THE PAST 24 HOURS. Inches.	RAIN-FALL OR MELTED SNOW IN THE PAST 24 HOURS. Millimeters.	WEATHER.	OBSERVER.
Albany, N. Y.	.....	.....	29.68	753.9	23	— 5.0	85	Calm	0	0	.....	1k	Haze	.....	.....	0	0	Fair	
Alpena, Mich.	.....	.....	29.65	753.1	35	1.7	70	W	12	5.4	.....	0	0	.....	.....	0	0	Clear	
Atlantic City, N. J.	.....	.....	29.87	758.7	32	0.0	79	W	8	3.6	.....	2ck	0	NW	.....	0	0	Fair	
Augusta, Ga.	.....	.....	30.27	768.8	33	0.6	80	NW	1	0.4	.....	0	0	.....	.....	0	0	Clear	
Baltimore, Md.	.....	.....	29.92	760.0	36	2.2	62	W	5	2.2	.....	2c	Sm'e	.....	W	0	0	Fair	
Barnegat, N. J.	.....	.....	29.84	757.9	30	— 1.1	68	W	14	6.3	.....	5ck	0	NW	.....	0	0	Fair	
Bismarck, Dakota	27.86	707.6	29.51	749.5	33	0.6	79	Calm	0	0	.....	.....	10s	.....	.....	0	0	Cloudy	
Boston, Mass.	.....	.....	29.72	754.9	30	— 1.1	59	SW	9	4.0	.....	4cs	Sm'e	NW	.....	0	0	Fair	
Breckenridge, Minn.	.....	.....	29.54	750.3	24	— 4.4	87	SE	6	2.7	.....	0	0	.....	.....	0	0	Clear	
Buffalo, N. Y.	.....	.....	29.76	755.9	29.0	— 1.7	78	SW	23	10.3	.....	0	0	.....	.....	0	0	Clear	
Burlington, Vt.	.....	.....	29.66	753.4	29	— 1.7	68	S	3	1.3	.....	0	2s	.....	.....	0.08	2.0	Fair	
Cairo, Ill.	.....	.....	30.28	769.1	29	— 1.7	78	S	3	1.3	.....	0	0	.....	.....	0	0	Clear	
Cape Hatteras, N. C.	.....	.....	30.01	762.2	38	3.3	54	W	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Cape Henry, Va.	.....	.....	29.99	761.7	35	1.7	80	W	10	4.5	.....	0	0	.....	.....	0	0	Clear	
Cape Lookout, N. C.	.....	.....	30.12	765.0	37	2.8	62	NW	16	7.2	.....	0	Haze	.....	.....	0	0	Clear	
Cape May, N. J.	.....	.....	29.89	759.2	33	0.6	69	W	28	12.5	.....	0	0	.....	.....	0	0	Clear	
Charleston, S. C.	.....	.....	30.24	768.1	37	2.8	62	W	6	2.7	.....	0	Sm'e	.....	.....	0.01	0.3	Clear	
Cheyenne, Wyoming	23.94	608.1	29.88	758.9	38	3.3	45	W	28	12.5	.....	0	1s	.....	.....	0	0	Clear	
Chicago, Ill.	.....	.....	29.94	760.5	34	1.1	71	S	12	5.4	.....	0	0	.....	.....	0	0	Clear	
Cincinnati, Ohio	.....	.....	30.11	764 8	33	0.6	79	SW	7	3.1	.....	0	0	.....	.....	0	0	Clear	
Cleveland, Ohio	.....	.....	29.92	760.0	33	0.6	69	SW	12	5.4	.....	Haze	0	.....	.....	0	0	Hazy	
Corsicana, Tex.	.....	.....	30.34	770.6	37	2.8	80	N	1	0.4	.....	Haze	5s	.....	.....	0	0	Fair	
Davenport, Iowa	.....	.....	29.97	761.5	34	1.1	79	SW	8	3.6	.....	0	0	.....	.....	0	0	Clear	
Denison, Tex.	.....	.....	30.31	769.9	37	2.8	70	SW	4	1.8	.....	1c	0	.....	.....	0	0	Clear	
Denver, Col.	24.75	628.6	29.97	761.2	47	8.3	27	W	5	2.2	.....	.....	10s	.....	.....	0	0	Cloudy	
Detroit, Mich.	.....	.....	29.84	757.9	35	1.7	52	W	8	3.6	.....	8cs	0	W	.....	0	0	Fair	
Dodge City, Kan.	27.30	693.4	29.64	752.8	34	1.1	79	SW	18	8.0	.....	0	2s	.....	SW	0	0	Clear	
Dubuque, Iowa	.....	.....	29.90	759.4	35	1.7	70	SW	1	0.4	.....	0	Haze	.....	.....	0	0	Clear	
Duluth, Minn.	.....	.....	29.56	750.8	35	1.7	79	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Eastport, Me.	.....	.....	29.68	753 9	21	— 6.1	71	SW	3	1.3	.....	2c	10s	.....	W	Inap.	Inap.	Cloudy	
Erie, Pa.	.....	.....	29.84	757.9	32	0.0	79	SW	14	6.3	.....	0	0	.....	.....	0	0	Clear	
Escanaba, Mich.	.....	.....	29.62	752.3	28	— 2.2	67	S	8	3.6	.....	0	0	.....	.....	0	0	Clear	
Fort Gibson, Indian Ter.	.....	.....	30.23	767.8	32	0.0	69	E	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Ft. St. Michael, Alaska	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Fort Sill, Indian Ter.	28.92	734.6	30.08	764.0	33	0.6	69	SW	10	4.5	.....	5k	0	SW	.....	0	0	Fair	
Fort Sully, Dakota	27.98	710.7	29.62	752.3	44	6.7	67	NW	16	7.2	.....	.....	10s	.....	NW	0	0	Cloudy	
Florence, Arizona	28.61	726.7	30.13	765.3	58	14.4	.....	E	.....	.....	.....	0	0	.....	.....	0	0	Clear	
Galveston, Tex.	.....	.....	30.36	771.1	48	8.9	70	NE	6	2.7	.....	10cs	Haze	.....	.....	0	0	Cloudy	
Grand Haven, Mich.	.....	.....	29.86	758.4	36	2.2	85	SW	22	9.8	.....	0	Sm'e	.....	SW	0	0	Clear	
Indianapolis, Ind.	.....	.....	30.13	765.3	33	0.6	65	SW	4	1.8	.....	0	Sm'e	.....	.....	0	0	Clear	
Indianola, Tex.	.....	.....	30.36	771.1	52	11.1	73	NE	10	4.5	.....	.....	10s	.....	.....	0	0	Cloudy	
Jacksonville, Fla.	.....	.....	30.27	768.8	39	3.9	63	NW	4	1.8	.....	0	0	.....	.....	Inap.	Inap.	Clear	
Keokuk, Iowa	.....	.....	30.01	762.2	35	1.7	61	SW	14	6.3	.....	0	0	.....	.....	0	0	Clear	
Key West, Fla.	.....	.....	30.16	766.1	59	15.0	87	N	16	7.2	.....	0	0	.....	.....	0	0	Clear	
Kittyhawk, N. C.	.....	.....	30.06	763.5	36	2.2	62	W	10	4.5	.....	0	0	.....	.....	0	0	Clear	
Knoxville, Tenn.	.....	.....	30.38	771.6	23	— 5.0	86	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
La Crosse, Wis.	.....	.....	29.76	755.9	38	3.3	71	S	11	4.9	.....	0	0	.....	.....	0	0	Clear	
Leavenworth, Kan.	.....	.....	30.02	762.5	32	0.0	79	S	10	4.5	.....	0	0	.....	.....	0	0	Clear	
Louisville, Ky.	.....	.....	30.23	767.8	32	0.0	59	S	8	3.6	.....	0	Haz	.....	.....	0	0	Clear	
Lynchburg, Va.	.....	.....	30.00	762.0	37	2.8	26	SW	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Malone, N. Y.	.....	.....	29.58	751.3	31	— 0.6	70	SW	6	2.7	.....	2k	0	NW	.....	0	0	Fair	
Marquette, Mich.	.....	.....	29.55	750.6	40	4.4	64	SW	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Memphis, Tenn.	.....	.....	30.34	770.6	30	— 1.1	79	Calm	0	0	.....	0	Fg',sm	.....	SW	0	0	Clear	
Milwaukee, Wis.	.....	.....	29.87	758.7	34	1.1	69	NW	14	6.3	.....	0	0	.....	.....	0	0	Clear	
Mobile Ala.	.....	.....	30.34	770.6	36	2.2	62	N	2	0.9	.....	0	0	.....	.....	0	0	Clear	
Montgomery, Ala.	.....	.....	30.34	770 6	34.5	1.4	65	N	2	0.9	.....	0	Sm'e	.....	.....	0	0	Clear	
Morgantown, W. Va.	28.97	735.8	30.07	763 8	30	— 1.1	48	S	10	4.5	.....	0	0	.....	.....	0	0	Clear	
Mt. Washington, N. H.	23.15	588.0	29.51	749.5	7	—13.9	100	NW	48	21.5	.....	.....	Fog	.....	.....	0	0	Foggy	
Nashville, Tenn.	.....	.....	30.34	770.6	26	— 3.3	88	Calm	0	0	.....	0	Fog	.....	.....	0	0	Clear	
New Haven, Conn.	.....	.....	29.77	756.1	35	1.7	70	SW	5	2.2	.....	8ck	Fog	W	.....	0	0	Cloudy	
New London, Conn.	.....	.....	29.76	755.9	33	0.6	69	W	12	5.4	.....	1c	5ck	E	W	0	0	Fair	
New Orleans, La.	.....	.....	30.33	770.4	42.5	5.8	46	NE	7	3.1	.....	5c	0	W	.....	0	0	Fair	
Newport, R. I.	.....	.....	29.75	755.6	30	— 1.1	67	SW	12	5.4	.....	4k	0	NW	.....	0	0	Fair	
New York, N. Y.	.....	.....	29.80	756.9	31	— 0.6	73	W	16	7.2	.....	8ck	2ks	W	.....	0	0	Fair	
Norfolk, Va.	.....	.....	30.03	762.7	36	2.2	61	SW	3	1.3	.....	0	Haze	.....	.....	0	0	Clear	
North Platte, Neb.	26.87	682.5	29.40	746.7	47	8.3	62	W	24	10.7	.....	.....	10ks	.....	W	0	0	Cloudy	
Omaha, Neb.	28.70	729.0	29.80	756.9	36	2.2	70	S	10	4.5	.....	0	0	.....	.....	0	0	Clear	
Oswego, N. Y.	.....	.....	29.70	754.4	35	1.7	75	SW	3	1.3	.....	Haz	Haze	.....	.....	0	0	Clear	
Pembina, Dakota	.....	.....	29.54	750.3	28	— 2.2	94	Calm	0	0	.....	0	10s	.....	.....	0	0	Cloudy	
Philadelphia, Pa.	.....	.....	29.87	758.7	29	— 1.7	67	W	16	7.2	.....	2cs	2s	W	.....	0	0	Fair	
Pike's Peak, Col.	17.64	448.0	29.85	758.2	10	—12.2	100	W	42	18.8	.....	.....	.....	.....	.....	0	0	Fair	
Pittsburgh, Pa.	.....	.....	29.96	761.0	31	— 0.6	68	W	6	2.7	.....	0	0	.....	.....	0	0	Clear	
Port Huron, Mich.	.....	.....	29.77	756.1	30	2.2	62	W	12	5.4	.....	2cs	0	.....	.....	0	0	Clear	
Portland, Me.	.....	.....	29.67	753.6	22	— 5.6	72	SW	1	0.4	.....	1ck	2s,hz.	W	W	0	0	Fair	
Portland, Oregon	.....	.....	30.26	768.6	48	8.9	92	Calm	0	0	.....	.....	10n	.....	.....	0.52	13.2	Light rain	
Punta Rassa, Fla.	.....	.....	30.21	767.3	48.0	9.2	81	N	16	7.2	.....	0	Haze	.....	.....	0	0	Clear	
Rochester, N. Y.	.....	.....	29.70	754.4	33	0.6	69	W	16	7.2	.....	0	Haze	.....	.....	0	0	Clear	
Salt Lake City, Utah	25.81	656.0	30.18	766.6	39	3.9	91	S	1	0.4	.....	.....	10n	.....	.....	0.08	2.0	Light rain	
Sandy Hook, N. J.	.....	.....	29.81	757.2	34	1.1	79	W	25	11.2	.....	10ck	0	W	.....	0	0	Cloudy	
San Diego, Cal.	.....	.....	30.17	766 3	53	11.7	86	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
San Francisco, Cal.	.....	.....	30.32	770.1	57	13.3	93	Calm	0	0	.....	.....	10s	.....	.....	0.01	0.3	Cloudy	
Santa Fé, N. M.	23.30	591.8	29.84	757.9	39	3.9	69	N	9	4.0	.....	.....	10s	.....	N	0	0	Cloudy	
Savannah, Ga.	.....	.....	30.26	768.6	36	3.3	71	NW	3	1.3	.....	0	Sm'e	.....	.....	Inap.	Inap.	Smoky	
Shreveport, La.	.....	.....	30.41	772.4	34	1.1	100	Calm	0	0	.....	.....	Fog	.....	.....	0	0	Foggy	
Smithville, N. C.	.....	.....	30.17	766.3	35	1.7	52	NW	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Springfield, Mass.	.....	.....	29.74	755.4	31	— 0.6	59	S	3	1.3	.....	5c	0	N	.....	0	0	Fair	
St. Louis, Mo.	.....	.....	30.20	767.1	37	2.8	53	SW	10	4.5	.....	0	0	.....	.....	0	0	Clear	
St. Marks, Fla.	.....	.....	30.29	769.4	31	— 0.6	79	N	3	1.3	.....	0	0	.....	.....	0	0	Clear	
St. Paul, Minn.	.....	.....	29.62	752.3	32	0.0	89	SE	4	1.8	.....	0	0	.....	.....	0	0	Clear	
St. Paul's Island, Alaska	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Thatcher's Island, Mass.	.....	.....	29.71	754.6	27	— 2.8	64	W	8	3.6	.....	1c	0	NW	.....	0	0	Clear	
Toledo, Ohio	.....	.....	29.89	759.2	35	1.7	73	SW	11	4.9	.....	2cs	Haze	SW	.....	0	0	Hazy	
Tucson, Arizona	27.70	703.6	30.25	768.3	38	3.3	.....	SE	.....	.....	.....	2c	0	NE	.....	0	0	Fair	
Tybee Island, Ga.	.....	.....	30.24	768.1	37	2.8	80	NW	4	1.8	.....	1c	Sm'e	.....	.....	0.15	3.8	Clear	
Vicksburg, Miss.	.....	.....	30.39	771.9	35	1.7	75	Calm	0	0	.....	2cs	Sm'e	.....	N	0	0	Fair	
Virginia City, M. T.	24.40	619.8	29.88	758.9	26	— 3.3	64	SE	1	0.4	.....	0	0	.....	.....	0.01	0.3	Clear	
Washington, D. C.	.....	.....	29.95	760.7	33	0.6	52	S	6	2.7	.....	1c	Sm'e	NW	.....	0	0	Fair	
Wilmington, N. C.	.....	.....	30.15	765.8	33	0.6	51	W	3	1.3	.....	0	0	.....	.....	0	0	Clear	

UNITED STATES SERIES.—CONTINUED.

STATIONS.	BAROMETER. Corrected for instrum'tal error and temperature. Inches.	BAROMETER. Corrected for instrum'tal error and temperature. Millimeters.	BAROMETER. Reduced to sea-level. Inches.	BAROMETER. Reduced to sea-level. Millimeters.	TEMPERATURE OF THE AIR. Fahrenheit.	TEMPERATURE OF THE AIR. Centigrade.	RELATIVE HUMIDITY. Per cent.	WIND. Direction. From—	WIND. Velocity. Miles per hour.	WIND. Velocity. Meters per second.	WIND. Force. 0—10.	CLOUDS. Amount. Upper. 0—10.	CLOUDS. Amount. Low'r. 0—10.	CLOUDS. Direction. Upper. From—	CLOUDS. Direction. Lower. From—	RAIN-FALL OR MELTED SNOW IN THE PAST 24 HOURS. Inches.	RAIN-FALL OR MELTED SNOW IN THE PAST 24 HOURS. Millimeters.	WEATHER.	OBSERVER.
Wood's Holl, Mass.	.....	.....	29.76	755.9	33	0.6	69	W	9	4.0	.....	5cs	0	NW	.....	0	0	Fair	
Yankton, Dakota	28.37	720.6	29.66	753.4	37	2.8	76	SW	15	6.7	.....	0	0	.....	.....	0	0	Clear	
Yuma, Arizona	.....	.....	30.14	765.5	59	15.0	.....	E	.....	.....	.....	0	0	.....	.....	0	0	Clear	
SUB-SERIES.																			
Kingston, Jamaica, W. I.	.....	.....	30.19	766.8	76	24.4	81	N	12	5.4	.....	2c	2s	N	.....	0	0	.....	James Gall.
Navassa, W. I.	.....	.....	.....	.....	77	25.0	.....	NE	.....	.....	2	.....	.....	.....	.....	Inap	Inap.	.....	Dr. G. H. Davison.
Clifton, Ja., W. I.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	C. Partridge.
Paramaribo, D. Guiana, S. A.	.....	.....	30.03	762.7	79	26.1	87	E	.....	.....	2	3c	5k	E	.....	0	0	Clear	C. J. Hering.
Batavia, Dutch Guiana, S. A.	30.07	763.7	.....	.....	79.7	26.5	.....	E	.....	.....	.....	.....	.....	.....	.....	0	0	Fair	Dr. H. Groot.
Medellin, Colombia, S. A.	25.96	641.5	.....	.....	65.2	18.4	79	Calm	.....	.....	0	3k	0	.....	.....	0	0	Fair	Thomas Herran.
York Factory, B. A.	.....	.....	29.78	756.4	2.0	—16.7	86	N	16	7 2	.....	.....	10n	.....	.....	0.05	1.3	Snowing	J. Fortescue, W. Wood
Honolulu, Oahu, H. I.	.....	.....	30.08	764.0	70	21.1	95	N	.....	.....	2	.....	.....	.....	.....	1.10	27.9	Clearing	Daniel Smith.
Makawao, Maui, H. I.	.....	.....	30.00	762.0	62	16.7	79	Calm	.....	.....	0	0	1k	.....	.....	0	0	.....	F. L. Clarke.

NOTE.—The originals give the amount of cloudiness by the scale 0 to 4, except York Factory, Makawao, Medellin and Paramaribo. The elevation of the barometer at Bismarck is 1,677 feet, or 511.1 meters; Cheyenne, 6,057.3 ft., or 1,846.2 m.; Clifton, about 1,502 ft., or 481.6 m.; Denver, 5,135 ft., or 1,565.2 m.; Dodge City, 2486ft., or 757.6 m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Florence, 1,550 (?) ft., or 472.5 (?) m.; Makawao, 2,205 ft., or 672.1 m.; Morgantown, 1,027.9 ft., or 313.3 m.; Medellin, 4,876 ft., or 1,486.2 m.; Mt. Washington, 6,285 ft., or 1,915.6 m.; North Platte, 2,846 ft., or 867.4 m.; Omaha, 1,054.6 ft., or 321.4 m.; Pike's Peak, 14,150.7 ft., or 4,313.1 m.; Salt Lake City, 4,362.2 ft., or 1,329.6 m.; Santa Fé, 6,862.2 (?) ft., or 2,091.6 (?) m.; Tucson, 2,545 (?) ft., or 775.7 (?) m.; Virginia City, 5,480 (?) ft., or 1,670.3 (?) m.; Yankton, 1,278 ft., or 389.5 m. The following constants are added in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Denver, 5.22 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.38 in.; Santa Fé, 6.54 in.; Tucson, 2.59 in.; Virginia City, 5.48 in. The elevation of Batavia is about 6 feet; the barometric readings need the addition of 0.2 mm. or 0.01 in. for reduction to sea-level.

UNITED STATES NAVAL SERIES.

By authority of the **SECRETARY OF THE NAVY.**

Furnished by the coöperation of the Navy Department, through Commodore Daniel Ammen, U. S. N., Chief of Bureau of Navigation.

STATIONS AND VESSELS.	True course toward—	Hourly rate in knots.	*Barometer as reported.		Temperature of the Air.		Relative Humidity.	Wind.				Clouds.				Rain-fall or melted snow in the past 24 hours.		State of Ocean.	Direction of swell from—	Weather.	Observer.
								Direction.	Velocity		Force.	Amount.		Direction.							
												Up'er	Low'r	Up'er	Low'r						
			Inches.	Millimeters.	Fahrenheit.	Centigrade.	Per cent.	From—	Miles per hour.	Meters per second.	0—10.	0—10.		From—	From—	Inches.	Millimeters.				
Naval Academy, Annapolis, Md.			29.57	757.1	32	0.0	90	W			3		3			0	0			Clear	
Naval Hospital, Annapolis, Md.			29.95	760.7	31	— 0.6	100	SW			1		1		SW	0	0			Fair	
Navy Yard, Mare Island, Cal.			30.39	771.9	68	14.4		SSW			1		0			0	0			Clear	
Navy Yard, Norfolk, Va.			30.12†	765.0†	30	— 1.1	89	Calm	0	0			0			0	0			Blue sky	
Navy Yard, Pensacola, Fla.			30.32	770 1	35	1.7		N			1		8		E	0	0			‡D. clouds	
Navy Yard, Portsmouth, N.H.			29.67	753.6	19	— 7.2		Calm	0	0					S	0	0			Fine	
¶ Canonicus, New Orleans, La.			30.25	768.3	43	6.1	92	NE			3		2		E					Hazy	
Colorado, New York, N. Y.			29.86	758.4	34	1.1		WSW	10	4.5			9		ESE	0	0			‡D. clouds	
Essex, Vera Cruz, Mex.			30.17	766.3	72	22.2	100	NW			5		10		SE			Smooth		Overcast	
¶ Gettysburg, Menton, France			29.67	753.6	56	13.3		ENE			2		7					Light	SSE	‡D. clouds	
Hartford, Hampton Roads, Va.			30.11	764.8	38	3.3		W			2		0			0	0			Pleasant	
Huron, Charleston, S. C.			30.28	769.1	40	4.4	78	WNW			3		0							Hazy	
Lackawana, Mare Island, Cal.			30.24	768.1	60	15.6	94	NNW			1							Smooth		Foggy	
Marion, Port Said, Egypt			29.88	758.9	67	19.4	95	WSW			1		0					Smooth		Blue sky	
Michigan, Erie, Pa.			29.34	745.2	33	0.6	70	SW			2		0							Clear	
Monongahela, Baltimore, Md.			29.90	759.4	37	2.8		W			2		c,s							‡D. clouds	
New Hampshire, Port Royal, S. C.			30.39	771.9	43	6.1		NW			1		0							Blue sky	
Omaha, Panama			30.10	764.5	74	23.3	95	NW			2		1			0	0	Smooth		Bright	
Ossipee, Pensacola, Fla.			30.32	770.1	39	3.9		N			1		2							Hazy	
Pensacola, Panama			30.09	764.3	78	25.6	91	NNW			2		1			0	0			Pleasant	
Plymouth, New Orleans, La.			30.34	770.6	42	5.6	66	NNE			2		10							Hazy	
Ranger, Hampton, Roads, Va.			30.12	765.0	34	1.1		WSW			3		0					Smooth	N	Clear	
Richmond, Montevideo, Uruguay			30.02	762.5	71.8	22.1	80	NNE			3		0							Hazy	
¶ Rio Bravo, Matamoras, Mex.			30.12	765.0	48	8.9		NW			1		10							Raining	
Santee, Annapolis, Md.			30.04	763.0	37	2.8	53	W			3		3							Clear	
St. Louis, League Island, Pa.			29.74	755.4	32	0.0		WSW	10	7.2			2		SE	0	0			Fair	
Vandalia, Constantinople, Turkey			29.64	752.8	51	10.6	93	NE			2		2		SW					‡D. clouds	
Wabash, Boston, Mass.			29.78	756.4	29	— 1.7		SW	10	4.5			5		NE	0	0			Hazy	
Wyoming, Washington, D.C.			30.15¡	765.8¡	34	1.1		WSW			2		2								

* It is not known that the barometer is corrected for temperature, instrumental error or elevation. † Aneroid Barometer. ‡ Detached clouds. ¶ Barometer corrected for instrumental error and reduced to sea-level.

UNITED STATES MARINE SERIES

REPORTED TO THE OFFICE OF THE CHIEF SIGNAL OFFICER OF THE ARMY.

NAMES OF VESSELS.	True course toward—	Hourly rate in knots.	Barometer reduced to sea-level.		Temperature of the Air.		Relative Humidity.	Wind.				Clouds.				State of Ocean.	Direction of swell from—	Weather.	OBSERVER.
								Direction.	Velocity.		Force.	Amount.		Direction.					
												Up'er	Low'r	Upper.	Lower.				
			Inches.	Millimeters.	Fahrenheit.	Centigrade.	Per cent.	From—	Miles per hour.	Meters per second.	0—10.	0—10.	0—10.	From—	From—				

PACIFIC MAIL S. S. CO. MARINE SERIES.

Furnished by the coöperation of ————, President; Williams, Blanchard & Co., Agents.

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MARINE SERIES. (Miscellaneous.)

Furnished by the coöperation of the Observer named.

Schooner Addie Fuller, N. 35°, 25′, W. 74°, 40′	WSW	3	29.98	761.5	48	8.9	56	NW	12	5.4		0	0			Swell.	N	Clear	Capt. James Jorgensen

NOTE.—The schooner Addie Fuller gives the amount of cloudiness by the scale 0 to 4.

COLLATED AT THE OFFICE OF THE CHIEF SIGNAL OFFICER OF THE ARMY, WASHINGTON, D. C.

The records which appear in this Bulletin are copied from the regular exchanges of this office, made in each instance in compliance with an especial request and are published for the uses of the coöperating observers. The barometric readings in the first two columns are reduced to freezing and their respective standards; those in the second two also to mean sea-level. The "weather" is generally published as given.

When the distinction between the upper and lower strata of clouds is not reported, the *kinds* or *types*, viz: cirrus, cumulus, stratus, nimbus, scud, fracto, pallio, haze, fog and smoke, as indicated, respectively, by the letters c, k, s, n, d, f, p, hz., fg. and sm'e, are generally published with the amount in the lower-cloud column. The distinction between the upper and lower strata is carefully made in the United States Series and a portion of the Canadian Series, and the types are indicated by the above letters or their combinations in the proper column.

Albert J. Myer

Brig Gen. (Bvt. Ass't.) Chief Signal Officer, U. S. A.

BULLETIN

OF

INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON FEBRUARY 22, 1877.

7:35 A. M. WASHINGTON mean time.

6:7 A. M. MEXICO mean time.
7:7 A. M. SAN JOSE mean time.
0:6 P. M. LISBON mean time.
0:28 P. M. MADRID mean time.
0:43 P. M. GREENWICH mean time.
0:53 P. M. PARIS mean time.
1:1 P. M. BRUSSELS mean time.
1:4 P. M. UTRECHT mean time.
1:13 P. M. BERNE mean time.
1:20 P. M. CHRISTIANIA mean time.

1:33 P. M. COPENHAGEN mean time.
1:33 P. M. ROME mean time.
1:37 P. M. BERLIN mean time.
1:49 P. M. VIENNA mean time.
1:55 P. M. STOCKHOLM mean time.
2:18 P. M. ATHENS mean time.
2:39 P. M. CONSTANTINOPLE mean time.
2:44 P. M. ST. PETERSBURG mean time.
6:36 P. M. CALCUTTA mean time.
10:2 P. M. TOKEI mean time.

ALGERIAN SERIES.

Furnished by the coöperation of General d'Eudeville, Commandant Supérieur du Génie in Algeria.

STATIONS.	Barometer: Corrected for instrum'tal error and temperature. Inches.	Barometer: Corrected for instrum'tal error and temperature. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Nemours			29.98	761.4	64.8	18.2		NW			2		2			0	0	Clear	Michel.
Algiers			29.89	759.1	55.6	13.1		N			2		4			0	0	Fair	Biscarrat.
La Calle			29.82	757.4	45.0	7.2		WNW			5		8			0.276	7.0	Cloudy	Fleury.
Tunis			29.86	758.4	61.2	16.2		W			6		7			0.167	4.0	Cloudy	Jacques.
Sfax																			
Saida			29.95	760.6	56.1	13.4		WNW			3		6			0	0	Fair	Milliot.
Tebessa			29.87	758.6	44.6	7.0		W			4		2			0.039	1.0	Clear	Bourgeois.
Geriville			29.89	759.2	45.1	7.3		WNW			5		6			0	0	Fair	Lemaillot.
Laghouat			29.91	759.7	59.0	15.0		W			6		2			0	0	Clear	Guyot.
Biskra			29.93	760.1	64.6	18.1		NW			5		8			0	0	Cloudy	Kuntz.

NOTE.—In the originals the distinction between the amount of upper and lower clouds is apparently not made. The weather is published as given. The rain-fall is measured at 7 a. m., local time.

AUSTRIAN SERIES.

Furnished by the coöperation of Professor Dr. Julius Hann, Director of the Imperial and Royal Central Meteorological Institute at Vienna.

STATIONS.	Barometer: Corrected for instrum'tal error and temperature. Inches.	Barometer: Corrected for instrum'tal error and temperature. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Agram			29.60	751.9	46.0	7.8	57	NE			2		5			0	0		Prof. Ivan Stoxr.
Cracow, I. R. Observatory			29.60	751.8	39.9	4.4	84	W			1		10			0.071	1.8		Dr. Wierzbiski.
Eperies			29.53	750.1	43.2	6.2	88	Calm			0		10			0	0		Julius Mikolik.
Gratz			29.62	752.4	42.4	5.8	47	NW			5		0			0.413	10.5		Andreas Rospini.
Hermannstadt	28.36	720 3	29.62	752.4	42.4	5.8	47	NW			5		0			0.413	10.5		Andreas Rospini.
Kremsmünster	28.03	711.9	29.44	747.8	47.1	8.4	72	SSE			2		10			0.254	6.45		Prof. Reissenberger.
Lemberg	28.35	720.2	29.78	755.2	36.7	2.6	75	W			3		7			0	0		Prof. C. Wagner.
Nyiregyhaza			29.55	750.5	34.9	1.6	85	SE			1		9			0.134	3.4		Dr. T. Stanecki.
Pola																			Habzsuda Daniel.
Szegedin			29.45	747.9	47.8	8.8	51	E			6		10cs			0	0		I.R.Hydrographic Office.
Trieste			29.49	749.1	41.0	5.0	76	Calm			0		10			0.319	8.10		Karl Stancel.
Vienna			29.59	751.5	50.0	10.0	38	ENE			3		0			0	0		Prof. V. Farolfi.
			29.65	753.2	41.4	5.2	66	NW			3		6			0.114	2.9		I. R. Central Met. Obs'y.

NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 7 p. m., local time. The elevation of Gratz is 343.5 meters, or 1,126.9 feet; Hermannstadt, 407.8 meters, or 1,337.9 feet; Kremsmünster, 383.6 meters, or 1,258.5 feet.

BELGIAN SERIES.

Furnished by the cooperation of J. C. Houzeau, Director of the Royal Observatory at Brussels.

STATIONS.	Barometer: Corrected for instrum'tal error and temperature. Inches.	Barometer: Corrected for instrum'tal error and temperature. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Arlon			29.91	759.7	34.9	1.6	82	NW			2		9			0.028	0.7		
Brussels			29.89	759.1	42.1	5.6	77	NW			2	.48	10k,o	NW	WNW	0.126	3 20		Royal Observatory
Furnes			29.91	759.8	39.9	4.4	79	NW			2		6			0.158	3.9		
Maeseyck			29.85	758.2	41.2	5.1	65	W			2		8			0.087	2.2		

NOTE.—In the originals, the weather is occasionally given in general notes.

BRITISH SERIES

Furnished by the coöperation of Robert H. Scott, Esq., Director of the Meteorological Office, London. Alexander Buchan, Secretary of the Scottish Meteorological Society, Edinburgh, and the respective Observers.

STATIONS.	Barometer. Corrected for instrumental error and temperature. Inches.	Barometer. Corrected for instrumental error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Upper 0—10.	Clouds. Amount. Lower 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Aberdeen	.....	.....	29.73	755.1	41.0	5.0	.....	WNW	26	11.6	.....	.....	6	.....	.....	0.04	1.14	*D. clouds	William Boswell.
Ardrossan	.....	.....	29.83	758.4	46	7.8	.....	NW	.....	.....	4	.....	5	.....	.....	.....	.....	*D. clouds	William McNeil.
Armagh, Observatory	.....	.....	30.06	763.5	43.3	6.3	.....	W	10	4.5	.....	.....	10	.....	.....	.....	.....	Gloomy	S. Call, for Dr. Robinson.
Bidston (Liverpool Obs.)	.....	.....	29.98	761.5	40.9	4.9	.....	WNW	23	10.3	.....	.....	10	.....	.....	.....	.....	Overcast	John Hartnup.
Birr Castle, (Parsonstown)	.....	.....	30.16	766.1	45.7	7.6	.....	WNW	.....	.....	1	.....	10	.....	.....	.....	.....	Drizzling	J. Dreyer.
Bradford	.....	.....	29.93	760.2	37.6	3.1	.....	N	.....	.....	1	.....	10	.....	.....	.....	.....	Snowing	J. McLandsborough.
Bridgetown, (Barbados)	.....	.....	30.03	762.7	82.8	28.2	.....	NE	.....	.....	1	.....	.....	.....	.....	.....	.....	*D. clouds	Sergt. J. F. Halanen, A.
Cambridge, Observatory	.....	.....	29.98	761.5	38.0	3.3	.....	NW	.....	.....	1	.....	10	.....	.....	.....	.....	Overcast	H. Todd. [H.C.
Cardington	.....	.....	30.01	762.2	39.4	4.1	.....	NW	.....	.....	1	.....	9	.....	.....	.....	.....	Overcast	John McLaren.
Carlisle	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	T. Bell, for J. Cartmell.
Chatham, School M. E.	.....	.....	30.07	763.8	40.2	4.6	.....	NE	.....	.....	2	.....	6	.....	.....	.....	.....	*D. clouds	Maj. C. N. Martin, R.E.
Dartmoor	28.62	726.9	30.18	766.6	35.6	2.0	.....	N	.....	.....	3	.....	7	.....	.....	.....	.....	*D. clouds	R. E. Power.
Davos Platz, (Switzerland)	24.47	621.5	.....	.....	24.6	— 4.1	64	N	.....	.....	1	.....	6	.....	.....	0.06	0.15	Threatening	Francis Redford, M. A.
Donaghadee	.....	.....	30.06	763.5	44	6.7	.....	W	.....	.....	4	.....	7	.....	.....	.....	.....	*D. clouds	J. Mac Gowan.
Dover	.....	.....	29.93	761.0	40	4.4	.....	N	.....	.....	3	.....	5	.....	.....	.....	.....	½ clouded	J. Costello.
Eccles, (near Manchester)	.....	.....	29.96	761.0	40.0	4.4	.....	NW	7.2	3.2	.....	.....	10	.....	.....	.....	.....	Gloomy	Thomas Mackereth.
Falmouth, Observatory	.....	.....	30.17	766.3	43.1	6.2	.....	NW	.....	.....	3	.....	9	.....	.....	.....	.....	Overcast	The Staff.
Fort Napier, (Natal)	27.70	703.6	29.44	760.5	80.5	26.9	.....	E	.....	.....	1	.....	10	.....	.....	.....	.....	Overcast	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)	.....	.....	29.83	757.7	90	32.2	.....	NW	.....	.....	0	.....	6	.....	.....	.....	.....	*D. clouds	
Galway, Queen's College	.....	.....	30.13	765.3	47	8.3	.....	NW	.....	.....	2	.....	10	.....	.....	.....	.....	Misty	Prof. A. H. Curtis.
Gibraltar, (Mediterranean)	.....	.....	29.92	760.0	62.3	16.8	.....	W	.....	.....	4	.....	0	.....	.....	.....	.....	.....	Corpl. C. Aitken, A.H.C.
Glasgow, Observatory	.....	.....	29.82	757.4	42.4	5.8	.....	WNW	.....	.....	1	.....	4	.....	.....	.....	.....	*D. clouds	Lewis Stuart.
Great Yarmouth	.....	.....	29.92	760.0	36	2.2	.....	NW	.....	.....	4	.....	6	.....	.....	.....	.....	Misty	G. T. Watson.
Greenwich, Royal Obs'y	.....	.....	30.01	762.2	39.2	4.0	.....	NNW	.....	.....	2	.....	9	.....	.....	.....	.....	*D. clouds	The Staff, for G. B. Airy.
Guernsey	.....	.....	30.10	764.5	43.1	6.4	.....	NNW	.....	.....	2	.....	3	.....	.....	.....	.....	*D. clouds	Dr. S. E. Hoskins.
Helston	.....	.....	30.16	766.1	45	7.2	.....	NW	.....	.....	6	.....	4k	.....	.....	0	0	Fair	M. P. Moyle.
Holyhead	.....	.....	29.98	761.5	44	6.7	.....	W	.....	.....	5	.....	10	.....	.....	.....	.....	Drizzling	John Tilston.
Kew, Observatory	.....	.....	30.03	762.7	40.0	4.4	.....	WNW	11	4.9	.....	.....	10	.....	.....	.....	.....	Hazy	The Staff.
Kingstown	.....	.....	30.08	764.0	43	6.1	.....	WNW	.....	.....	4	.....	9	.....	.....	.....	.....	Overcast	George Mitchell.
Leicester Museum	.....	.....	30.00	762.0	38.0	3.3	.....	NW	.....	.....	2	.....	10	.....	.....	.....	.....	*D. clouds	Wm. J. Harrison, F.G.S.
Malta, (Mediterranean)	.....	.....	29.97	761.2	54.0	12.2	.....	NE	.....	.....	2	.....	6k	.....	.....	.....	.....	*D. clouds	Corp'l. P. Bravis, A.H.C.
Nairn	.....	.....	29.76	755.9	42	5.6	.....	W	.....	.....	3	.....	5	.....	.....	.....	.....	½ clouded	W. D. Penny.
Nassau, (Bahamas)	.....	.....	30.07	763.8	67.1	19.7	.....	NE	.....	.....	1	.....	5	.....	.....	.....	.....	*D. clouds	Surg. Maj. Henry.
Nottingham, Observatory	.....	.....	29.97	761.2	39.0	3.9	.....	NW	.....	.....	3	.....	9k	.....	NW	0.01	0.28	Overcast	E. J. Lowe, F. R. S.
Oscott, St. Mary's College	.....	.....	30.01	762.2	37.6	2.8	.....	NW	.....	.....	4	.....	9	.....	.....	.....	.....	*D. clouds	Rev. Stephen Whitty.
Oxford, Radcliffe Obs'y	.....	.....	30.01	762.2	40	4.4	.....	WNW	.....	.....	2	.....	9	.....	.....	.....	.....	Overcast	J. Lucas.
Plymouth	.....	.....	30.13	765.3	45	7.2	.....	N	.....	.....	1	.....	2	.....	.....	.....	.....	*D. clouds	John Merrifield.
Roche's Point	.....	.....	30.20	767.1	43	6.1	.....	NW	.....	.....	3	.....	8	.....	.....	.....	.....	Cloudy	W. Kennedy.
Saint Ann's Head	.....	.....	30.12	765.0	41	5.0	.....	NW	.....	.....	3	.....	8	.....	.....	.....	.....	Overcast	John C. Walker.
Saint Helier, (Jersey)	.....	.....	30.09	764.3	45.4	7.4	.....	NE	.....	.....	3	.....	5	.....	.....	.....	.....	½ clouded	A. P. Amy.
Sandwick Manse, (Orkneys)	.....	.....	29.99	754.1	40	4.4	.....	NW	89	17.4	.....	.....	5	.....	.....	.....	.....	Showery	Rev. C. Clouston, LL. D.
Scarborough	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	F. Shaw.
Scutari Cemetery, (Turkey)	.....	.....	29.68	753.6	53.6	11.7	.....	SW	.....	.....	1	.....	6	.....	.....	Haze	Haze	*D. clouds	Sergt. W. H. Lyne.
Sheffield	.....	.....	29.97	761.2	37.4	4.1	.....	NNW	.....	.....	3	.....	8	.....	.....	0.005	0.18	Overcast	W. F. Cooper.
Silloth Rectory	.....	.....	29.86	758.4	42.1	5.6	87	NW	.....	.....	2	.....	10	.....	.....	0	0	Overcast	Rev. Francis Redford.
Stonyhurst, Observatory	.....	.....	29.93	761.0	36.9	2.7	.....	W	.....	.....	3	.....	10	.....	.....	.....	.....	Raining	Rev. S. J. Perry.
Stornoway, Lews C., (Hebr.)	.....	.....	29.81	757.9	45	7.2	.....	NNW	.....	.....	6	.....	10	.....	.....	.....	.....	Raining	John Smith.
Stratfield Turgiss	.....	.....	30.07	763.8	41.3	5.2	.....	NW	.....	.....	1	.....	8	.....	.....	.....	.....	*D. clouds	Rev. Charles H. Griffith.
Thurso	.....	.....	29.70	754.4	41	6.7	.....	WNW	.....	.....	5	.....	7	.....	.....	.....	.....	Showery	John Trotter.
Truro, Royal Institution	.....	.....	30.16	766.1	45	7.2	.....	N	.....	.....	6	.....	8	.....	.....	.....	.....	Gloomy	W. Newcombe.
Valencia, Observatory	.....	.....	30.28	769.1	48.3	9.1	.....	NNW	20	8.9	.....	.....	7	.....	.....	.....	.....	*D. clouds	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Henry Mercer.
Cape Good Hope, Obs'y	.....	.....	30.01	762.2	85.0	29.4	41	S	5	2.2	.....	0	0	.....	.....	.....	.....	.....	The Staff, for E. J. Stone.
Hobart Town, (Tasmania)	.....	.....	29.51	749.5	68.0	20.0	82	W	.....	.....	1	.....	10kn	.....	.....	.....	.....	Drizzling	Francis Abbott, F.R.A.S.
Leith, Restalrig Park	.....	.....	29.83	757.7	40.7	4.8	.....	SW	.....	.....	3	9ck	.....	.....	.....	0	0	Cloudy	Andrew Gibb.
Mauritius, Observatory	.....	.....	30.08	764.0	82.0	27.8	62	E	16.8	7.5	.....	0	2	.....	ESE	0.030	0.76	Blue sky	C. Meldrum.
Melbourne, Observatory	.....	.....	29.89	759.2	56.2	13.4	93	W	10	4.5	.....	.....	10	.....	.....	0.28	7.1	Light rain	R. L. J. Ellery.
Monach Light-house, (Hebrides)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	J. Youngclause.
North Unst, (Shetland Is.)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Robert Burnet.

NOTE.—Generally, the originals do not give the relative humidity, rain-fall, or distinction between upper and lower clouds. The originals give the wind direction to 32 points and weather by the Beaufort notation. The originals give the barometer for Aberdeen, Cardington, Freetown, Galway, Oxford, St. Helier, Sandwick, Scarborough, Stonyhurst, Leith, Monach and North Unst as read off and the amount of cloudiness for Stornoway by the scale 0 to 4. The wind-force is given by the scale 0 to 12 in the official series; 0 to 6 in the sub-series: except in lbs. per square foot for Greenwich and Hobart Town. The rain-fall is measured at Aberdeen at 10 a. m.; Bradford, 9 a. m.; Hobart Town, 7:30 a. m.; Nottingham, 6 p. m.; Mauritius, 9 a. m., local time. The elevation of Dartmoor is 1,400 feet, or 426.7 meters; Davos Platz, 5,105? feet, or 1,556.0? meters; Fort Napier, 2,200 feet, or 670.6 meters. *Detached clouds.

By authority of the Minister of Foreign Affairs.

COSTA RICA SERIES.

Furnished by the coöperation of Senor Federico Maison, Director of the Central Office of Statistics and Meteorology.

San José	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
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DANISH SERIES.

Furnished by the coöperation of Captain N. Hoffmeyer, Director of the Royal Danish Meteorological Institute at Copenhagen.

Copenhagen	.....	.....	29.68	753.9	31.6	— 0.2	94	Calm	.....	.....	0	.....	10	.....	.....	.....	.....	.....	.....
Fanöe	.....	.....	29.74	756.5	35.2	1.8	88	NNW	.....	.....	2	.....	5	.....	.....	.....	.....	.....	.....
Godthaab, (Greenland)	.....	.....	29.62	752.4	30.4	— 0.9	100	S	.....	.....	6	.....	10	.....	.....	.....	.....	Snowing	.....
Stykkisholm, (Iceland)	.....	.....	30.15	765.7	24.6	— 4.1	96	SE	.....	.....	4	.....	8	.....	.....	.....	.....	.....	.....
Thorshavn, (Faröe)	.....	.....	29.92	760.0	37.9	3.3	68	N	.....	.....	6	.....	5	.....	.....	.....	.....	.....	.....
Vestervig	.....	.....	29.71	754.6	33.8	1.0	96	NE	.....	.....	2	.....	6	.....	.....	.....	.....	.....	.....
	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
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	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—The originals give the wind-force by the scale 0 to 6; occasionally, weather by Vienna symbols; no distinction between the amount of upper and lower clouds.

FRENCH SERIES.

Furnished by the co-operation of His Excellency, U. J. Le Verrier, Director of the Paris Observatory, and the respective Observers.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Alengon	.....	.....	29.99	761.8	46.4	8	74	NE	.....	.....	4	.....	8km	.....	NE	0	0	Very cloudy	Normal School.
Amiens	.....	.....	29.90	759.5	42.1	5.6	88	NE	.....	.....	2	.....	5	.....	NE	0.622	15.8	Cloudy	Normal School.
Avignon	.....	.....	29.71	754.6	45.1	7.3	44	N	.....	.....	8	.....	2	.....	N	0	0	Slightly cl'dy	Normal School.
Bar-sur-Seine	.....	.....	29.94	760.4	39.7	4.3	54	NE	.....	.....	2	.....	8km	.....	NE	0.114	2.9	Very cloudy	C. Saillard.
Beaumette, (near Angers)	.....	.....	29.97	761.1	43.7	6.5	58	NE	19.2	8.6	.....	.....	.....	.....	NNE	0	0	.....	Beaumette Observ'tory.
Beauvais	.....	.....	29.99	761.8	36.9	2.7	87	NNW	.....	.....	3	.....	10	.....	NNW	0.179	4.55	Covered	Normal School.
Besançon	.....	.....	29.92	759.9	38.1	3.4	83	NE	.....	.....	3	.....	8	.....	N	0	0	Very cloudy	Normal School.
Bourg en Bresse	.....	.....	29.80	756.9	35.8	2.1	79	N	.....	.....	6	.....	5cn	.....	SW	0.04	1.	Cloudy	Normal School.
Bourges	.....	.....	29.97	761.3	40.6	4.8	91	NW	.....	.....	4	.....	5	.....	NNE	0.055	1.4	Cloudy	Normal School.
Brest	.....	.....	30.10	764.6	46.6	8.1	51	NNE	.....	.....	3	.....	7	.....	NW	0.010	0.25	.....	Naval Observatory.
Carcassonne	.....	.....	29.90	759.5	43.2	6.2	70	W	.....	.....	2	.....	2	.....	E	0	0	Slightly cl'dy	Normal School.
Caen	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Chartres	.....	.....	29.93	760.3	41.4	5.2	90	N	.....	.....	2	.....	9	.....	SSW	0.069	1.8	.....	Normal School.
Châlons-sur-Marne	.....	.....	29.93	760.3	40.6	4.8	71	N	.....	.....	3	.....	10km	.....	S	0.016	0.4	Covered	Normal School.
Clermont	.....	.....	29.95	760 8	36.3	2.4	69	NW	.....	.....	2	.....	10	.....	NW	0.063	1.6	.....	Puy de Dome Obs'y.
Commercy	.....	.....	29.93	760.2	36.9	2.7	87	NW	.....	.....	4	.....	8kn	.....	NW	0	0	Very cloudy	Normal School.
Commune de Gréasque*	.....	.....	29.62	752.3	46.2	7.9	44	NW	.....	.....	4	.....	2	.....	NW	0	0	.....	M. Kina.
Grenoble	.....	.....	29.79	756.6	37.2	2.9	70	NW	.....	.....	8	.....	8n	.....	.....	0.689	17.50	Snowing	Normal School.
La Roche-sur-Yon	.....	.....	30.10	764.6	47.1	8.4	94	N	.....	.....	4	.....	0	.....	.....	0	0	Clear	Normal School.
Le Mans	.....	.....	30.06	763.5	41.9	5.5	81	NE	.....	.....	4	.....	5	.....	N	0.324	8.25	Cloudy	Normal School.
Lons-Le-Saulnier	.....	.....	29.87	758.6	36.5	2.5	72	SE	.....	.....	2	.....	10	.....	.....	0.142	3.60	Snowing	Normal School.
Lorient	.....	.....	30.14	765.5	47.8	8.8	76	NNE	.....	.....	3	.....	5	.....	NE	0.024	0.6	Cloudy	Naval Observatory.
Mâcon	.....	.....	29.89	759.1	36 0	2.2	89	N	.....	.....	6	.....	10	.....	.....	0	0	Covered	Normal School.
Metz	.....	.....	29.95	760.6	37.0	2.8	77	NNW	.....	.....	2	.....	10	.....	.....	0	0	Covered	M. Schuster.
Mirecourt	.....	.....	29.86	758.4	36.1	2.3	85	NNW	.....	.....	4	.....	10	.....	SSE	0	0	Covered	Normal School.
Nismes	.....	.....	29.72	755.0	47.1	8.4	59	N	.....	.....	8	.....	.....	.....	.....	0	0	.....	Normal School.
Orleans	.....	.....	30.00	761.9	40.3	4.6	84	N	.....	.....	6	.....	5	.....	N	0	0	Cloudy	Normal School.
Paris, Observatory	.....	.....	29.98	761.4	38.7	3.7	80	WNW	.....	.....	2	.....	9k	.....	N	0.046	1.16	Almost cov'd	National Observatory.
Parthenny	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Privas	.....	.....	29.84	757.8	39.2	4	36	WNW	.....	.....	6	.....	2	.....	N	0	0	Slightly cl'dy	Normal School.
Rochefort, Observatory	.....	.....	30.08	763.9	45 7	7.6	65	NNW	.....	.....	3	.....	8	.....	SSE	0.28	7.	¾ covered	Naval Observatory.
Rouen	.....	.....	30.05	763.2	41.9	5.5	78	NNW	.....	.....	2	.....	2	.....	N	0.047	1.2	Slightly cl'dy	Normal School.
Saint Lo	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Tarbes	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Villefranche	28.87	733.3	29.98	761.6	38.8	3.8	97	W	.....	.....	2	.....	10	.....	.....	0.28	7.	Covered	Normal School.
	.....	.....	29.98	760.2	39.0	3.9	81	N	.....	.....	4	.....	5	.....	N	0	0	Cloudy	Normal School.
SUB-SERIES.																			
Fort de France, Martinique	.....	.....	29.85	758.3	75.2	24	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	L'Abbé Marchési.
Marseilles	.....	.....	29.58	751.4	49.5	9.7	68	NW	.....	.....	3	.....	1	.....	.....	0	0	Partly cl'dy.	Marseilles Observatory.
Mont-Louis	.....	.....	29.89	759.3	21.6	— 5.8	82	NNW	16.8	7.50	.....	.....	10	.....	NW	0.449	11.4	.....	—. Falguère.
Montsouris, Paris	24.58	624.3	29.96	761.0	37.6	3.1	97	NW	.....	.....	2	.....	10	.....	NW	0.055	1.4	.....	Montsouris Observatory
Perpignan	.....	.....	29.85	758.2	43.3	6.3	56	NW	35.4	15.83	.....	.....	2	.....	NW	0.016	0.4	.....	Dr. Fines.
Pic du Midi, (Summit,) H. P.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. Baylac.
Pic du Midi, (Plantade,) H. P.	22.18	563.4	.....	.....	8.6	—18.0	.....	NNE	.....	.....	3–4	.....	10	.....	.....	2.394	60.8	Snowy	General de Nansouty.
Saint Maur, (near Paris)	.....	.....	29.96	761.0	42.8	6.0	69	NW	.....	.....	2	.....	10	.....	.....	.....	.....	Rain & snow	E. Renou.
Toulouse	.....	.....	29.84	757.8	39.7	4.3	79	NW	.....	.....	4	.....	9	.....	.....	0.024	0.6	Rain	...louse Observatory.
Tours	.....	.....	30.02	762.6	43.7	6.5	57	NNW	.....	.....	2	.....	7	.....	N	0.035	0.9	.....	.....
Versailles, (near Paris)	.....	.....	29.97	761.1	42.1	5.6	73	N	.....	.....	2	.....	10	.....	.....	0.127	3.22	Covered	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai)	.....	.....	30.02	762.6	51.3	10.7	91	SE	14.8	6.6	.....	.....	4	.....	.....	0	0	.....	Marc Dechevrens, S. J.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—Generally, the originals give the wind-force by the scale 0 to 7; no distinction between upper and lower clouds, and, in the official series, the amount by the scale 0 to 4 the rain-fall as measured at 7, 8 or 9 a. m., local time; at Clermont, 9 a. m. of the following day; the weather in general terms as published. The elevation of Clermont is 38 meters, or 1,272.9 feet; Commune de Gréasque, 322 meters, or 1,056.4 feet; Tarbes, 308 meters, or 1,010 feet; Mont-Louis, 1,586.40 meters, or 5,204.8 feet; Pic du Midi, (Summit,) 2,57 meters, or 9,439.1 feet; Pic du Midi, Plantade,) 2,366 meters, or 7,762.6 feet. In correcting the Mont-Louis barometric observations for altitude, the constant 135. millimeters has been added. *Bouches-du-Rhône

GERMAN SERIES.

Furnished by the coöperation of Professor Dr. G. Neumayer, Director of the German Naval Observatory, Hamburg.

Bamberg	.....	.....	29.72	755.0	36.5	2.5	79	NW	.....	.....	4	.....	10	WNW	.....	0.079	2.0	.....	Prof. T. Hoh
Berlin	.....	.....	29.69	754.2	38.1	3.4	85	NW	.....	.....	2	.....	10	.....	.....	0.886	22.6	.....	Prof. Arndt.
Breslau	.....	.....	29.66	753.3	35.2	1.8	98	WNW	.....	.....	4	.....	10	.....	.....	0.307	7.8	Raining	Royal University Obs'y.
Carlsruhe	.....	.....	29.84	757.8	36.1	2.3	79	N	.....	.....	1	.....	10	.....	.....	Inap.	Inap	Light snow	A. Senz.
Cassel	.....	.....	29.78	756.3	37.2	2.9	65	NNW	.....	.....	5	.....	8	W	.....	0.024	0.6	.....	Dr. H. Möhl.
Crefeld	.....	.....	29.82	757.3	40.6	4.8	80	NW	.....	.....	3	.....	8	.....	.....	0.04	1.	.....	Director Lose.
Emden	.....	.....	29.86	758.4	39.9	4.4	84	N	.....	.....	2	.....	5	.....	.....	0	0	.....	Prof. Prestel.
Frankfort on the Main	.....	.....	29.87	758.6	40.5	4.7	54	N	.....	.....	1	.....	8	.....	.....	0.016	0.4	.....	Physical Society.
Friedrichshafen	28.37	720.7	29.84	758.0	38.8	3.8	63	N	.....	.....	4	.....	10	.....	.....	0.126	3.2	Snowing	M. Wilhelm.
Hamburg	.....	.....	29.73	755.1	31.6	— 0.2	94	NW	.....	.....	3	.....	10	.....	.....	0.059	1.5	Light snow	Captain F. Hegemann,
Kiel	.....	.....	29.70	754.3	34.0	1.1	86	N	.....	.....	1	.....	10	.....	.....	0.071	1.8	.....	Prof. G. Karsten
Königsberg, (Prussia)	.....	.....	29.67	753.5	37.0	2.8	79	SE	.....	.....	2	.....	9	.....	.....	0.031	0.8	Snowing	Prof. E. Luther.
Köslin	.....	.....	29.67	753.6	39.0	3.9	.....	Calm	.....	.....	0	.....	10	.....	.....	0	0	Foggy	H. Müller.
Leipsic	.....	.....	29.76	755.8	33.1	0.6	92	WSW	.....	.....	2	.....	10	.....	.....	0	0	.....	Prof. Bruhns.
Memel	.....	.....	29.71	754.5	34.7	1.5	87	Calm	.....	.....	0	.....	10ks	.....	.....	0.020	0.5	.....	Reinbrecht & Skalweit.
Münster	.....	.....	29.74	755.3	41.9	5.5	67	NW	.....	.....	2	.....	8	.....	.....	0	0	.....	Prof. E. Heis.
Neufahrwasser	.....	.....	29.65	753.2	35.8	2.1	91	ENE	.....	.....	1	.....	10	.....	.....	0	0	Smoke-haze	A Lothe.
Posen	.....	.....	29.64	752.9	37.6	3.1	90	NNW	.....	.....	2	.....	10	.....	.....	0.067	1.7	.....	Dr. Magener.
Strassburg, (in Alsace)	.....	.....	29.88	759.0	37.9	3.3	80	NNW	.....	.....	2	.....	10	.....	.....	0	0	.....	Dr. Schur.
Stuttgart	.....	.....	29.84	757.8	35.1	1.7	77	NW	.....	.....	2	.....	9	.....	.....	0.008	0.2	.....	Prof. Schoder.
Thorn	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Dr. Hasenbalg.
Treves, (Trier)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Prof. Flesch.
Weissenburg, (Bavaria)	28.23	717.0	29.76	755.8	39.2	4.0	46	NE	.....	.....	2	.....	10	.....	.....	0	0	.....	Dr. von Bebber.
Wustrow, Naval School	.....	.....	29.78	756.4	34.5	1.4	78	WNW	.....	.....	1	.....	10	NW	.....	Inap.	Inap.	.....	E. F. Schütz.
GERMAN NAVAL SERIES.			29.75	755.7	34.5	1.4	95	E	.....	.....	2	.....	10	.....	.....	0	0	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—The elevation of Friedrichshafen is 418.4 meters, or 1,356.3 feet; Weissenburg, 431 meters, or 1,413 feet. In the originals the distinction between the amount of upper and lower clouds is not made. It is not always certain that the remarks in the weather column refer to the moment of observation.

GREEK SERIES.

Furnished by the coöperation of Professor Dr. J. F. Julius Schmidt, Director of the Royal Observatory at Athens.

STATIONS.	Barometer. Corrected for instru-m'tal error and temperature. Inches.	Barometer. Corrected for instru-m'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Athens	.....	.....	29.65	753.2	55 2	12.9	.....	SW.	.....	.....	.....	...	.....	.....	.....	.....	.....	Cloudy.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

Note.—The originals give the barometer corrected, but not reduced to sea-level; occasionally the kind of clouds; the weather as published. They omit the humidity, wind-force, amount of cloudiness and rain-fall.

INDIAN SERIES.

Furnished by the coöperation of H. F. Blanford, Meteorological Reporter to the Government of India.

Kurrachee	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Deesa	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Bombay	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Poona	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Lahore	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Belgaum	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Bangalore	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Rorkee	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Agra	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Trichinopoly	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Nagpur	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Madras	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Lucknow	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Allahabad	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Patna	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Hazaribagh	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Cuttack	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Calcutta (Alipore)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Goalpara	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Chittagong	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Sibsagar	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Rangoon	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Jubbulpore	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
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ITALIAN SERIES.

Furnished by the cooperation of His Excellency the Min ster of Agriculture, Industry and Commerce, and the respective Observers.

Udine	.....	.....	29.52	749.9	49.1	9.5	31	SE	0.7	0.3	.....	.....	9	.....	.....	0	0	.....	Prof. Giovanni Clodig.
Stelvio	21.64	549.7	.....	.....	11.7	—11.3	.....	E	.....	.....	1	.....	9	S	.....	0.11	2.9	.....	Signora Ernesta Manfredi.
Valdobbia	21.67	550.3	.....	.....	14.0	—10.0	71	W	.....	.....	4	.....	7	SW	.....	0	0	.....	Ab. Dom. Mongini.
Padua	.....	.....	29.53	750.0	46.6	8.1	50	NNE	8.7	3.9	.....	.....	10	SE	.....	0	0	.....	Prof. Dott. Lorenzoni.
Vicenza	.....	.....	29.58	751.2	46.0	7.8	39	NW	0.7	0.3	.....	.....	6	.....	.....	0	0	.....	Conte Alm. Da Schio.
Verona	.....	.....	29.55	750.6	47.8	8.8	60	NE	.....	.....	2	.....	10	.....	.....	0	0	.....	Dott. B. Bertoncelli.
Bergamo	28.21	716.6	29.55	750 6	43.9	6.6	65	SE	.....	.....	1	.....	7	.....	.....	0	0	.....	Prof Trionfini Carlo.
Domodossola	.....	.....	29.58	751.2	49.3	9.6	62	N	.....	.....	6	.....	3	.....	.....	0	0	.....	Prof. Giuseppe Oriza.
Milan	.....	.....	29.58	751.2	39.9	4.4	92	N	.....	.....	1	.....	1	.....	.....	0	0	.....	Ab. Gio. Capelli
Pavia	.....	.....	29.58	751.3	42.3	5.7	69	SE	.....	.....	1	.....	9	.....	.....	0	0	.....	Prof. Gio. Cantoni.
Moncalieri	.....	.....	29.59	751.5	47.8	8.8	34	WSW	0	0	.....	.....	6	E	.....	0	0	.....	Prof P. F. Denza.
Mondovi	27.65	702.4	29.60	751.7	44.6	7.0	20	NW	.....	.....	6	.....	5	S	.....	0	0	.....	Prof. D. C. Bruno.
Porto Maurizio	.....	.....	29.58	751.2	51.4	10.8	8	N	.....	.....	4	.....	10	.....	.....	0	0	.....	Prof. L. Vassallo.
Genoa	.....	.....	29.54	750.4	48.9	9.4	28	N	6.9	3.1	.....	.....	10	.....	.....	0	0	.....	Prof. G M Garibaldi.
Piacenza	.....	.....	29.60	751.8	40.3	4.6	82	SSE	1.3	0.6	.....	.....	10	.....	.....	0	0	.....	Dott. G. Manzi.
Parma	.....	.....	29.58	751.4	42.8	6.0	76	SW	.....	.....	4	.....	10	.....	.....	0	0	.....	Prof. P. Pigorini.
Florence	.....	.....	29.51	749.6	43.3	6.3	75	NE	.....	.....	4	.....	10	N	.....	0	0	.....	Cav. F. Meucci.
Leghorn	.....	.....	29.48	748.8	42.8	6.0	80	NNE	7.4	3.3	.....	.....	10	.....	.....	0	0	.....	Prof. P. Monte.
Siena	28.22	716.7	29.45	748.0	39.7	4.3	80	NE	3.8	1.7	.....	.....	10	W	.....	0.285	7.3	Raining	Prof. L. Toscani.
Urbino	27.91	709.0	29.51	749.6	34.2	1.2	98	N	.....	.....	4	.....	10	.....	.....	0.49	12.5	Snowing	Prof. P. Serpieri.
Pesaro	.....	.....	29.49	749.0	43.0	6.1	92	SW	13.0	5.8	.....	.....	10	N	.....	1.10	28.4	.....	Prof. Luigi Guidi.
Ancona	.....	.....	29.45	748.0	44.6	7.0	84	WNW	.....	.....	4	.....	10	.....	.....	2.09	53.1	.....	Prof. F. De— Bosis.
Grosseto	.....	.....	29.43	747.6	45.5	7.5	77	N	.....	.....	2	.....	8	NE	.....	0.528	13.4	.....	Avv. P. Ponticelli.
Rome	.....	.....	29.37	746.1	51.4	10.8	65	SE	6.5	2.8	.....	.....	7	E	.....	0.349	8.8	.....	Prof's. P. Secchi & L. Respighi
Naples, O. U	.....	.....	29.39	746.5	54.3	12.4	67	S	.....	.....	1	.....	9	NW	.....	0.249	6.3	Raining	Prof. L. Palmieri.
Lecce	.....	...	29.48	748.7	51.1	10.6	63	NNW	31.1	13.9	.....	.....	5	.....	.....	0	0	.....	Prof. C. De—Giorgi.
Cosenza	.....	.....	29.55	750.5	42.4	5.8	78	NW	7.4	3.3	.....	.....	10	.....	.....	2.03	51.7	Thunder-storm	Prof. F. D. Conti.
Cagliari	.....	.....	29.60	751.7	46.4	8.0	59	NW	.....	.....	8	.....	7	NW	.....	0.59	15.2	Rain & hail	Prof. A. Pacinotti.
Riposto, (Sicily)	.....	.....	29.52	749.8	58.5	14.7	34	W	.....	.....	2	.....	3	S	.....	0	0	.....	Prof. F. Caflero.
Palermo	.....	.....	29.53	750.0	53.6	12.0	45	WSW	14.8	6.4	.....	.....	9	WSW	.....	0.55	14.1	Raining	Prof. G. Cacciatore.
Caltanissetta	27.56	702.6	29.65	753.1	45.3	7.4	66	W	.....	.....	8	.....	10	SE	.....	0.169	4.3	Rain & snow	Prof. A. Pagani.
Siracusa	.....	.....	29.63	752.7	55.0	12.8	55	W	.....	.....	8	.....	7	W	.....	0.016	0.4	Light rain	Prof. V. Giuliano.
Sub-Series.																			
Naples, S. R.	.....	.....	29.43	747.5	47.8	8.8	76	NW	1.8	0.8	.....	.....	10	NW	.....	0.83	21.2	...	Prof. F. Brioschi
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
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Note.—The originals give the wind-force by the scale 0 to 4, or the velocity in kilometers per hour; generally, no distinction between upper and lower clouds; occasionally the weather by the Vienna symbols. The elevation of Stelvio is 2,543.0 meters, or 8,342.9 feet; Valdobbia, 2,548.0 meters or 8,360.3 feet; Bergamo, 379.6 meters, or 1,245 3 feet; Mondovi, 556 meters, or 1,824.2 feet; Siena, 348.5 meters, or 1,143.3 feet; Urbino, 451 meters, or 1,479.7 feet; Caltanissetta, 570.3 meters, or 1,871.0 feet.

JAPANESE SERIES.

Furnished by the coöperation of the Imperial University of Tokei, Japan.

Tokei	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Prof. P. V. Veeder.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
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.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

Note.—The originals give the amount of cloudiness by the scale 0 to 4 without distinguishing between upper and lower clouds. The rain-fall is measured at 7 a. m., local time.

By authority of the SECRETARY OF PUBLIC WORKS.

MEXICAN SERIES.

Furnished by the coöperation of Senor Mariano Barcena, Director of the Central Meteorological Observatory in the City of Mexico.

STATIONS.	Barometer: Corrected for instrum'tal error and temperature. Inches.	Barometer: Corrected for instrum'tal error and temperature. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er. 0—10.	Clouds. Amount. Low'r. 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Mexico																			Mariano Barcena.
																			Vicente Reyes.
																			Miguel Perez.

NOTE.—The elevation of Mexico is 2,290 meters, or 7,512.9 feet. The rain-fall is measured at 6 a. m., local time. (Engineers in charge.)

NETHERLANDS' SERIES.

Furnished by the cooperation of Professor Buys Ballot, Director of the Royal Meteorological Institute of the Netherlands at Utrecht.

Flushing			29.92	759.9	41.0	5.0		NW			4					0.087	2.2	
Groningen			29.74	755.4	39.0	4.4										0.004	0.1	
Helder			29.83	757.7	39.2	4.0		WNW			4					0.118	3.0	
Utrecht			29.82	757.4	39.7	4.3	83	NW			3		5			0.138	3.5	Cloudy

NOTE.—The originals give the wind-pressure in kilograms per square meter; for Utrecht, they give the weather as published, from which the amount of cloudiness is taken by the scale 0 to 4, without distinguishing between upper and lower clouds. It is assumed that the barometer readings have been reduced to sea-level.

NORWEGIAN SERIES.

Furnished by the cooperation of Professor H. Mohn, Director of the Royal Norwegian Meteorological Institute at Christiania.

Bergen			29.77	756.1	30.9	— 0.6	85	Calm	0	0			2			0	0	
Bröno			29.67	753.7	28.4	— 2.0	64	NNW	20.1	9			9			0	0	
Christiania			29.81	757.2	27.3	— 2.6	72	E	6.0	2.7			9			0	0	
Tromsö			29.45	748.0	19.0	— 7.2	81	SW	4.5	2			10			0.240	6.1	

NOTE.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols. The cloudiness and weather at Bergen refer to 2h., p. m., local time, instead of 1h., 4 min.

PORTUGUESE SERIES.

Furnished by the cooperation of J. C. de Brito Capello, Director of the Meteorological Observatory of the Infante Don Luiz at Lisbon.

Angra, (Azores)			30.46	773.7	55.8	13.2	79	E	16.1	7.2		8			Inap.	Inap.	Raining	Dr. J. A. Sampaio.
Campo Major			30.06	763.4	54.7	12.6	33	NNW	12.5	5.6		1			0	0		Dr. A. M. R. dos Santos.
Funchal, (Madeira)			30.15	765.7	63.5	17.5	57	E	14.3	6.4		10			0	0		Capt. D. A. de Cunha.
Lisbon			30.13	765.3	55.6	13.1	52	N	21.0	9.4		1			0	0		The Observatory.
Ponta Delgada, (Azores)			30.43	773.0	67.9	14.4	63	ENE	3.8	1.7		3			0	0		

NOTE.—The originals give the wind-velocity in kilometers per hour, occasionally, the weather by the Vienna symbols; the amount of cloudiness without distinguishing between upper and lower clouds; the barometer corrected but not reduced to sea-level. The rain-fall at Lisbon is measured at noon, instead of 0 h. 6 m., p. m.

RUSSIAN SERIES.

Furnished by the cooperation of Professor H. Wild, Director of the Imperial Central Physical Observatory of Russia, at St. Petersburg.

Warsaw			29.57	751.1	35.6	2.0	93	E	2	1		10						Astronomical Obs.
Wilna			29.72	755.0	32.0	0.0	83	SE	4	2		10						Astronomical Obs.
Dorpat			29.76	756.0	32.4	0.2	89	SW	2	1		10						Physical Cabinet.
St. Petersburg			29.73	755.2	31.3	— 0.4	90	SW	7	3		10						Central Physical Obs.
Kuopio			29.65	753.1	19.4	— 7.0	89	W	7	3		0						Ch. Forsten.
Kieff			29.75	755.7	25.0	— 3.9	91	ESE	11	5		10						Physical Cabinet.
Nikolaiev			29.63	752.6	32.5	0.3	89	E	13	6		10						Kurdakof.
Kertch			29.68	753.8	38.7	3.7	83	E	4	2		8						Lagorio.
Moscow			30.10	764.6	23.2	— 4.9	88	S	9	4		10						Meteorological Obs.
Lugan			29.99	761.8	16.9	— 8.4	76	ENE	22	10		2						Meteorological Obs.
Archangel			29.41	746.9	27.0	— 2.8	96	SW	7	3		10					Snowing	Ogorodnikof.
Tiflis	28.50	723.8	29.03	760.8	49.5	9.7	65	SE	4	2		6						Physical Observatory.
Astrakhan			30.18	766.6	20.3	— 6.5	76	E	9	4		0						Sebastianof.
Kasan			30.40	772.2	1.2	—17.1	78	S	13	6		2						Physical Cabinet.
Orenburg			29.84	757.9	26.1	— 3.3	89	SSE	13	6		7						Tschernichef.
Ekaterinburg	29.32	744.8	29.35	770.9	16.2	— 8.7	58	WSW	13	6		6						Meteorological Obs.
Nukuss			30.19	766.8	30.9	— 0.6	92	ENE	9	4		8						
Kasaly																		Bobrof.
Tashkend	28.04	727.4	30.42	772.7	41.0	5.0	65	Calm	0	0		8						Michelson.
Barnaul			30.09	779.4	3.6	—15.8	72	SW	9	4		9						Meteorological Obs.
Yeniseisk			30.24	768.1	1.8	—16.8	81	S	4	2		10					Snowing	Marks.
Irkutsk																		Usolzef.
Peking, (China)			29.92	759.9	28.0	— 2.2	57	NW	31	14		5						Physical Observatory.
Nertchinsk																		Meteorological Obs.
Vladivostock																		
Nikolaievsk, on the Amoor																		

NOTE.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols; they omit the rain-fall. The elevation of Tiflis is 409 meters, or 1,341.8 feet; Ekaterinburg, 306.4? m., or 1,005.2? ft.; Tashkend, 494.2? m., or 1,621.3? ft.; Irkutsk, 892 m., or 1,286 ft.; Nertchinsk, 652.0? m., or 1,942.2? ft.

SPANISH SERIES.

Furnished by the cooperation of Antonio Aguilar, Director of the Royal Observatory at Madrid, and of Don Cecilio Pujazon, Captain R. N. Director of the Naval Observatory at San Fernando.

Madrid			30.03	762.7	46.8	8.2	44	N	10.4	4.66		0	8			0	0	Cloudy
San Fernando			30.04	762.9	55.4	13.0	53	NW	12.3	5.5		0	2		NW	0	0	

NOTE.—The originals give the weather in general terms, as published; rain-fall for San Fernando from preceding to following midnight; wind-velocity for Madrid in kilometers per hour.

SWEDISH SERIES.

Furnished by the coöperation of Professor R. Rubenson, Director of the Royal Swedish Meteorological Institute, at Stockholm, and of Dr. H. H. Hildebrandsson, Chief of the Meteorological Division of the Upsala Observatory.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Haparanda			29.62	752.4	10.8	—11.8	100	SW			2		0			0	0		
Umea																			
Hernosand			29.76	755.9	31.3	— 0.4	83	Calm			0		2			0	0		
Stockholm			29.77	756.1	27.7	— 2.4	87	ENE			4		0			0.075	1.9		
Wisby			29.72	754.9	33.1	0.6	92	E			4		10			0.138	3.5		
Sub-Series.																			
Upsala			29.80	756.9	18.5	— 7.5	95	NNW	0	0			0			0.001	0.02		Dr. Hildebrandsson.

Note.—The originals give the wind-force by the scale 0 to 6, and Upsala also velocity in meters per second; occasionally, the weather by the Vienna symbols, or in general terms; no distinction between the amount of upper and lower clouds. The rain-fall is measured at 8 a. m., local time.

SWISS SERIES.

Furnished by the coöperation of Professor R. Wolf, Director of the Observatory at Zurich, and of Professor E. Plantamour, Director of the Observatory at Geneva.

Geneva	28.36	720.4	29.84	757.9	37.4	3.0	57	NNE			5		9			0.047	1.2	Cloudy	The Observatory.
Zurich	28.17	715.4	29.87	758.6	35.8	2.1	71	E			1		9			0.138	3.5	Snowing	The Observatory.

Note.—For Geneva the corresponding departures from the normal values are: Barometer, —5.5 mm; Thermometer, —1.7 cent.; Relative Humidity, —11 per cent.

Note.—The rain-fall is measured at Zurich at 7 a. m. on the following day. The originals give the barometer corrected but not reduced to sea-level; the wind-force by the scale 0 to 4 for Zurich; the amount of cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The elevation of Geneva is 408 meters, or 1,339 feet, and that of Zurich 470 meters, or 1,542 feet.

TURKISH SERIES.

Furnished by the cooperation of A. Coumbary, Effendi, Director of the Central Observatory at Constantinople, and of Professor C. V. A. Van Dyck, Superintendent of the Lee Observatory at Beirut.

Constantinople																			
Fao, (Persian Gulf)																			
Salonica																			
Valona																			
Varna																			
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y			30.02	762.5	65.5	18.6	64	SW			4		8s		SW	0	0	Hazy	Prof. C. V. A. Van Dyck.

Note.—The originals give the wind-force by the scale 0 to 7, (except Beirut, by the scale 0 to 12, and Constantinople velocity in meters per second;) the weather in general terms as published; no distinction between upper and lower clouds, and, except Constantinople and Beirut, the amount by the scale 0 to 4. It is assumed that the barometer is reduced to sea-level.

CANADIAN SERIES.

Furnished by the cooperation of Professor G. T. Kingston, Director of the Magnetic Observatory at Toronto, and Superintendent of the Meteorological Office of the Dominion of Canada, and the respective Observers. Those marked with a star (*) are also telegraphed daily to the office of the Chief Signal Officer, U. S. Army.

Bathurst, N. B			29.86	758.4	10.6	—11.9	88	Calm	0	0			10						Hon. J. Ferguson.
Brockville, Ontario			29.76	755.9	33	0.6		SW	1	0.4		2c	0	SW		0	0	Fair	W. R. Bigg.
*Chatham, N. B			29.88	758.9	2	—16.7	97	Calm	0	0		2k	Haze			0	0	Fair	G. A. Blair.
Charlottetown, P. E. Island			29.93	760.2	3	—16.1	54	Calm	0	0		0	0			0	0	Clear	H. J. Cundall, C. E.
Cornwall, Ontario			29.71	754.6	34.9	1.6	77	SW			1	2cs	0	W		0	0	Fair	James Smith, M. A.
Dalhousie, N. B			29.87	758.7	14.2	— 9.9	100	SW			1					0	0	Threatening	H. A. Johnson.
Esquimault, B. C			29.64	752.8	49.3	9.6	100	NE				10cs	0			0.38	9.7	Cloudy	W. H. Bevis.
*Father Point, Quebec			29.69	754.1	31	— 0.6	89	S	2	0.9		0	2s		W	0	0	Clear	J. McWilliams.
Fredericton, N. B			29.94	760.5	8.1	—13.3	100	Calm	0	0		0	0			0	0	Clear	Prof. Harrison.
*Fort Garry, Manitoba			30.10	764.5	10	—12.2	94	N	22	9.8		0	0			Inap.	Inap	Clear	James Stewart.
Goderich, Ontario			29.72	754.9	37.3	2.9	65	SW			4	5c	3s	W		0	0	Cloudy	H. J. Strang, M. A.
Granton, Ontario	28.62	720.9	29.74	755.4	35.7	2.1		W			1	1c	0			0	0	Clear	James Grant.
*Halifax, N. S			29.91	759.7	15	— 9.4	82	NW	2	0.9		5cs	0			0	0	Fair	F. Allison, M. A.
Hamilton, Ontario			29.70	754.4	37.2	2.9	62	W			2	10cs	0			0	0	Bright	G. Dickson.
Heart's Content, N. F			29.88	758.9	31	— 0.6	100	SW			1		10			0.25	6.3	Overcast	E. Weedon.
*Kingston, Ontario			29.78	756.4	35	1.7	75	W	2	0.9		5c	0			0	0	Fair	S. Woods, M. A
*Montreal, Quebec			29.72	754.9	31	— 0.6	82	SW	16	7.2		2cs	0			0	0	Clear	C. H. McLeod, C. E.
*Ottawa, Ontario			29.69	754.1	24	— 4.4	74	S	4	1.8		2cs	0	S		0	0	Clear	J. B. Haney.
*Parry Sound, Ontario			29.70	754.4	23	— 5.0	67	S	3	1.3		2cs	0	S		0	0	Fair	Rev. R. Mosley.
Port Dover, Ontario			29.80	756.9	31	— 0.6	89	SW	11	4.9		10ck	0	SW		0	0	Fair	H. Morgan.
Port Hastings, N. S			29.91	759.7	18.3	— 7.6		NW								0	0	Fine	Peter Grant
Port Stanley, Ontario			29.81	757.2	29	— 1.7	89	SW	5	2.2		8ck	Haze	W		0	0	Cloudy	M. Payne.
*Quebec, Quebec			29.75	755.6	31	0.6	79	Calm	0	0		0	0			0	0	Clear	Capt. Ashe, R. N.
*Rockliffe, Ontario			29.70	754.4	15	— 9.4	100	Calm	0	0		8cs	0	NW		0	0	Fair	
St. John, N. B			29.96	761.0	21	— 6.1	93	Calm	0	0		0	0			0	0	Clear	G. Murdoch, C. E.
*Saugeen, Ontario			29.65	753.1	38	3.3	63	SW	5	2.2		10cs	0			0	0	Cloudy	K. Stewart.
Stayner, Ontario			29.68	753.9	40	4.4	40	W	15	6.7		5c	0	W		0	0	Fair	R. J. Cole.
Stratford, Ontario	28 44	722.4	29.76	755.9	32.0	0.0	89	SW	8	3.6		2cs	5s	W		0	0	Fine	C. J. MacGregor, M. A.
*Sydney, C. B			29.93	760.2	9	—12.8	96	S	2	0.9		8c	Haze	SW		0	0	Fair	T. C. Hill.
*Toronto, Ontario			29.77	756.1	33	0.6	70	W	6	2.7		5cs	0	W		0	0	Fair	Magnetic Observatory.
Woodstock, Ontario			29.77	756.1	36.6	2.6	80	W	6	2.7		3c	4ks	W		0	0	Cloudy	J. Montgomery.
Sub-Series.																			
St. Johns, Newfoundland			29.93	760.2	30.0	— 1.1		Calm					10n			1.65	41.9		John Delany

Note.—The originals for Brockville, Charlottetown, Port Dover, Port Stanley, Stayner, St. Johns, N. F. and those telegraphed, give the amount of cloudiness by the scale 0 to 4. The elevation of Granton is 1,015 feet, or 309.4 m.; Stratford, 1,182 feet, or 360.3 m

UNITED STATES SERIES.

Furnished by the coöperation of Bvt. Brig. Gen. Albert J. Myer, Chief Signal Officer, U. S. Army.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er. 0—10.	Clouds. Amount. Low'r. 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall. Millimeters.	Weather.	Observer.
Albany, N. Y.			29.84	757.9	33	0.6	70	Calm	0	0		2c	Haze			0	0	Fair	
Alpena, Mich.			29.60	751.8	35	1.7	70	SW	2	0.9		2cs	0	SW		0	0	Fair	
Atlantic City, N. J.			29.93	760.2	35	1.7	61	W	5	2.2		5c	Haze	W		0	0	Fair	
Augusta, Ga.			30.01	762.2	36	2.2	90	Calm	0	0		8c	Haze			0	0	Fair	
Baltimore, Md			29.95	760.7	35	1.7	70	Calm	0	0		5c	Sm'e			0	0	Smoky	
Barnegat, N. J			29.91	759.7	34	1.1	69	W	5	2.2		8c	Haze			0	0	Hazy	
Bismarck, Dakota	28.14	714.7	29.76	755.9	25	— 3.9	75	NW	9	4.0			10s		NW	0.12	3.0	Cloudy	
Boston, Mass			29.86	758.4	34	1.1	79	SW	2	0.9		4c	Haze	W		0	0	Fair	
Breckenridge, Minn			29.70	754.4	32	0.0	89	N	24	10.7			10s		NW	0.01	0.3	Cloudy	
Buffalo, N. Y			29.77	756.1	38.0	3.3	46	SW	6	2.7		1c	0			0	0	Clear	
Burlington, Vt			29.80	756.9	35	1.7	62	Calm	0	0		5c	0			0	0	Fair	
Cairo, Ill			29.74	755.4	42	5.6	42	SE	8	3.6		2c	2s	S		0	0	Fair	
Cape Hatteras, N. C.			29.92	760.0	46	7.8	60	W	10	4.5		0	Haze			0	0	Clear	
Cape Henry, Va			29.94	760.5	42	5.6	50	W	6	2.7		0	Haze			0	0	Clear	
Cape Lookout, N. C			30.00	762.0	48	8.9	85	SW	11	4.9		0	Haze			0	0	Fair	
Cape May, N. J			29.94	760.5	38	3.3	63	NW	6	2.7		2c	Haze	W		0	0	Hazy	
Charleston, S. C			30.05	763.3	45	7.2	76	SW	4	1.8		5c	Sm'e			0	0	Fair	
Cheyenne, Wyoming	23.98	609.1	29.92	760.0	24	— 4.4	60	NW	16	7.2		0	0			Inap.	Inap.	Clear	
Chicago, Ill			29.63	752.6	39	3.9	55	S	15	6.7		Haze	Haze			0	0	Hazy	
Cincinnati, Ohio			29.78	756.4	37	2.8	80	SE	3	1.3		2c	Sm'e	SW		0	0	Fair	
Cleveland, Ohio			29.82	757.4	38	3.3	46	SE	9	4.0			10s		SE	0	0	Cloudy	
Corsicana, Tex			29.85	758.2	48	8.9	70	W	10	4.5			10s			0	0	Cloudy	
Davenport, Iowa			29.53	750.0	38	3.3	62	S	1	0.4		4ck	6s	S		0	0	Cloudy	
Denison, Tex			29.89	759.2	45	7.2	76	NW	12	5.4		8c	2s	W		0	0	Cloudy	
Denver, Col	24.79	629.6	30.01	762.2	27	— 2.8	77	S	4	1.8		0	0			0	0	Clear	
Detroit, Mich			29.72	754.9	37	2.8	54	SW	7	3.1		10cs	0			0	0	Cloudy	
Dodge City, Kan	27.30	693.4	29.63	752.6	35	1.7	80	NW	24	10.7		0	5s		NW	0	0	Fair	
Dubuque, Iowa			29.51	749.5	36	2.2	80	Calm	0	0		5cs	Haze	SW		0	0	Fair	
Duluth, Minn			29.66	753.4	39	3.9	81	NE	16	7.2			10s		NE	0	0	Cloudy	
Eastport, Me			29.90	759.4	31	— 0.6	89	Calm	0	0		0	0			0	0	Clear	
Erie, Pa			29.79	756.7	43	6.1	51	S	14	6.3		5ck	Haze	S		0	0	Fair	
Escanaba, Mich			29.56	750.8	27	— 2.8	77	N	5	2.2		5c	0	N		0	0	Fair	
Fort Gibson, Indian Ter			29.73	755.1	43	6.1	83	W	8	3.6		0	2s			0.01	0.3	Fair	
Ft. St. Michael, Alaska																			
Fort Sill, Indian Ter	28.71	729.2	29.85	758.2	38	3.3	45	NW	30	13.4		0	0			0	0	Clear	
Fort Sully, Dakota	28.19	716.0	29.87	758.7	37	2.8	71	NW	24	10.7			10s		NW	Inap.	Inap	Cloudy	
Florence, Arizona	28.44	722.4	29.96	761.0	55	12.8		N				0	0			0	0	Clear	
Galveston, Tex			29.97	761.2	53	11.7	93	N	8	3.6			10n			Inap.	Inap.	Light rain	
Grand Haven, Mich			29.60	751.8	40	4.4	68	S	21	9.4		5c	Haze			0	0	Fair	
Indianapolis, Ind			29.72	754.9	39	3.9	47	SE	6	2.7		5ck	Sm'e			0	0	Fair	
Indianola, Tex			29.99	761.7	54	12.2	79	NE	4	1.8			10s			0	0	Cloudy	
Jacksonville, Fla			30.09	764.3	44	6.7	75	SW	1	0.4		10cs	0	W		0	0	Cloudy	
Keokuk, Iowa			29.47	748.5	43	6.1	83	S	4	1.8			10s		S	0	0	Threatening	
Key West, Fla			30.02	762.5	64	17.8	83	SE	4	1.8		0	0			0	0	Clear	
Kittyhawk, N. C			29.98	761.5	40	4.4	64	SW	10	4.5		0	Haze			0	0	Clear	
Knoxville, Tenn			29.98	761.5	30	— 1.1	65	E	1	0.4		5cs	0	SW		0	0	Cloudy	
La Crosse, Wis			29.46	748.3	37	2.8	70	Calm	0	0		Haze	Haze			0	0	Hazy	
Leavenworth, Kan			29.57	751.1	41	5.0	83	NW	10	4.5			10n			0.01	0.3	Light rain	
Louisville, Ky			29.80	756.9	41	5.0	48	S	4	1.8		5c	Haze			0	0	Fair	
Lynchburg, Va			29.94	760.5	31	— 0.6	68	Calm	0	0		10c	Sm'e	W		0	0	Cloudy	
Malone, N. Y			29.70	754.4	39	3.9	62	S	12	5.4		5c	0	W		0	0	Fair	
Marquette, Mich			29.64	752.8	33	0.6	69	NW	10	4.5			10s			0	0	Cloudy	
Memphis, Tenn			29.82	757.4	43	6.1	48	S	6	2.7			10s		SW	0	0	Cloudy	
Milwaukee, Wis			29.58	751.3	35	1.7	61	S	7	3.1		5c	Fog	NW		0	0	Cloudy	
Mobile Ala			30.00	762.0	46	7.8	85	S	2	0.9			10s		SW	0	0	Cloudy	
Montgomery, Ala			30.01	762.5	41.5	5.3	83	SW	1	0.4			10s			0	0	Cloudy	
Morgantown, W. Va	28.85	732.8	29.93	760.2	36	2.2	61	W	2	0.9		5c	0	W		0	0	Fair	
Mt. Washington, N. H	23.50	596.9	29.86	758.4	24	— 4.4	74	NW	24	10.7		2c	0	NW		0	0	Fair	
Nashville, Tenn			29.86	758.4	41	5.0	48	E	5	2.2			10s			0	0	Cloudy	
New Haven, Conn			29.86	758.4	33	0.6	90	Calm	0	0		2c	Fog	NW		0	0	Foggy	
New London, Conn			29.88	758.9	32	0.0	79	Calm	0	0		1c	Fog	W		0	0	Fair	
New Orleans, La			29.98	761.5	49.5	9.7	67	Calm	0	0			10s		W	0	0	Cloudy	
Newport, R. I			29.88	758.9	35	1.7	69	SW	4	1.8		2c	Sm'e	S		0	0	Smoky	
New York, N. Y			29.91	759.7	37	22.8	54	SW	5	2.2		8ck	Sm'e	SW		0	0	Fair	
Norfolk, Va			29.77	761.2	38.5	3.6	52	Calm	0	0		Haze	Sm'e			0	0	Hazy	
North Platte, Neb	27.01	686.0	29.63	752.6	34	1.1	69	W				0	2ks		W	0	0	Fair	
Omaha, Neb	28.48	723.4	29.55	750.6	37	2.8	80	NW	16	7.2			10s			Inap.	Inap.	Threatening	
Oswego, N. Y			29.79	756.7	38.5	3.6	56	S	6	2.7		8cs	2s	SW		0	0	Cloudy	
Pembina, Dakota			29.98	761.5	20	— 6.7	85	N	25	11.2			10s		N	0.02	0.5	Cloudy	
Philadelphia, Pa			29.94	760.5	36	2.2	62	NW	2	0.9		5c	Fog			0	0	Fair	
Pike's Peak, Col	17.49	444.2	29.70	754.4	— 1	—18.3	37	NE	36	16.1		0	0			0.05	1.3	Clear	
Pittsburgh, Pa			29.88	758.9	37	2.8	54	SE	3	1.3		5c	0	NE		0	0	Fair	
Port Huron, Mich			29.70	754.4	37	2.8	58	S	10	4.5		8cs	2s, sm'	SW		0	0	Smoky	
Portland, Me			29.85	758.2	28	— 2.2	88	Calm	0	0		2c	2s, hz.	N		0	0	Fair	
Portland, Oregon			29.85	758.2	53	11.7	93	Calm	0	0			10n			0.30	7.6	Light rain	
Punta Rassa, Fla			30.06	763.5	55.6	12.8	86	NE	8	3.6		2cs	8ks	SW	S	0	0	Cloudy	
Rochester, N. Y			29.76	755.9	40	4.4	48	SW	11	4.9		2cs	2s	W	SW	0	0	Fair	
Salt Lake City, Utah	25.78	654.8	30.11	764.8	37	2.8	71	E	6	2.7			10s			0.02	0.5	Cloudy	
Sandy Hook, N. J			29.91	759.7	36	2.2	70	W	11	4.9		10c	Haze	W		0	0	Cloudy	
San Diego, Cal			30.00	762.0	56	13.3	43	Calm	0	0		0	0			0	0	Clear	
San Francisco, Cal			30.11	764.8	54	12.2	93	E	4	1.8		0	5s			0	0	Fair	
Santa Fé, N. M	23.26	590.8	29.80	756.9	25	— 3.9	63	SW	4	1.8		0	0			0	0	Clear	
Savannah, Ga			30.05	763.3	44	6.7	67	SW	2	0.9		5c	Sm'e	W		0	0	Smoky	
Shreveport, La			29.91	759.7	46	7.8	77	S	4	1.8		5cs	Sm'e	S		0	0	Fair	
Smithville, N. C			30.02	762.5	46	7.8	77	W	4	1.8		8cs	Haze			0	0	Cloudy	
Springfield, Mass			29.88	758.9	31	— 0.6	68	Calm	0	0		5c	Fog			0	0	Fair	
St. Louis, Mo			29.63	752.6	45	7.2	46	S	12	5.4		0	10s			0	0	Cloudy	
St. Marks, Fla			30.05	763.3	39	3.9	91	Calm	0	0		0	10s			0	0	Cloudy	
St. Paul, Minn			29.50	749.3	40	4.4	64	NW	10	4.5		0	10s			0	0	Cloudy	
St. Paul's Island, Alaska																			
Thatcher's Island, Mass			29.87	758.7	34	1.1	79	S	8	3.6		5c	0	SW		0	0	Hazy	
Toledo, Ohio			29.73	755.1	40	4.4	56	S	7	3.1		8c	Sm'e	SW		0	0	Smoky	
Tucson, Arizona	27.54	699.5	30.09	764.3	39	3.9		S				0	0			0	0	Clear	
Tybee Island, Ga			30.04	763.0	38	3.3	90	SW	6	2.7		5c	Sm'e	SW		0	0	Fair	
Vicksburg, Miss			29.93	760.2	44	6.7	58	S	7	3.1			10s, sm		S	0	0	Cloudy	
Virginia City, M. T	24.30	617.2	29.78	756.4	30	— 1.1	73	Calm	0	0		8k	0	NW		0	0	Cloudy	
Washington, D. C			29.97	761.2	30	— 1.1	69	Calm	0	0		5c	1s	W	W	0	0	Smoky	
Wilmington, N. C			30.00	762.0	40	4.4	56	SW	5	2.2		8cs	Haze	SW		0	0	Fair	

UNITED STATES SERIES.—CONTINUED.

STATIONS.	BAROMETER. Corrected for instrum'tal error and temperature. Inches.	BAROMETER. Corrected for instrum'tal error and temperature. Millimeters.	BAROMETER. Reduced to sea-level. Inches.	BAROMETER. Reduced to sea-level. Millimeters.	TEMPERATURE OF THE AIR. Fahrenheit.	TEMPERATURE OF THE AIR. Centigrade.	RELATIVE HUMIDITY. Per cent.	WIND. Direction. From—	WIND. Velocity. Miles per hour.	WIND. Velocity. Meters per second.	WIND. Force. 0—10.	CLOUDS. Amount. U'per 0—10.	CLOUDS. Amount. Low'r 0—10.	CLOUDS. Direction. Upper. From—	CLOUDS. Direction. Lower. From—	RAIN-FALL OR MELTED SNOW IN THE PAST 24 HOURS. Inches.	RAIN-FALL OR MELTED SNOW IN THE PAST 24 HOURS. Millimeters.	WEATHER.	OBSERVER.
Wood's Holl, Mass	.....	.....	29.90	759.4	37	2.8	71	SE	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Yankton, Dakota	28.41	721.6	29.70	754.4	30	2.2	90	NW	30	13.4	.....	.....	10n	.....	.....	0.30	7.6	Light rain	
Yuma, Arizona	.....	.....	29.94	760.5	67	19.4	.....	N	.....	.....	.....	0	0	.....	.....	0	0	Clear	
SUB-SERIES.																			
Kingston, Jamaica, W. I	.....	.....	30.13	765.3	74	23.3	76	Calm	0	0	.....	2c	2s	.....	.....	0	0	.....	James Gall.
Navassa, W. I	.....	.....	.....	.....	77	25.0	.....	NE	.....	.....	3	.....	.....	.....	.....	0	0	.....	Dr. G. H. Davison.
Clifton, Ja., W. I	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	C. Partridge.
Paramaribo, D. Guiana, S. A	.....	.....	29.99	761.7	81	27.2	78	E	.....	.....	3	0	5k	.....	.....	0	0	Clear	C. J. Hering.
Batavia, Dutch Guiana, S. A	30.07	763 7	.....	.....	78.8	26	.....	E	.....	.....	.....	.....	.....	.....	.....	0	0	Fair	Dr. H. Groot.
Medellin, Colombia, S. A	25.23	640.8	.....	.....	66.5	19.2	75	Calm	.....	.....	0	1k	0	.....	.....	0	0	Fair	Thomas Herran.
York Factory, B. A	.....	.....	30.15	765.8	—18.0	—27.8	68	N	10	4.5	.....	0	2s	.....	NW	0	0	Fair	J. Fortescue, W. Wood
Honolulu, Oahu, H. I	.....	.....	30.05	763.3	70	21.1	95	E	.....	.....	1	.....	.....	.....	.....	0	0	Clear	Daniel Smith.
Makawao, Maui, H. I	.....	.....	30.01	762.2	62	16.7	72	Calm	.....	.....	0	0	0	.....	.....	0	0	.....	F. L. Clarke

NOTE.—The originals give the amount of cloudiness by the scale 0 to 4, except York Factory, Makawao, Medellin and Paramaribo. The elevation of the barometer at Bismarck is 1,677 feet, or 511.1 meters: Cheyenne, 6,057.3 ft., or 1,846.2 m.; Clifton, about 2,892 ft., or 881.6 m.; Denver, 5,185 ft., or 1,565.2 m.; Dodge City, 2486ft., or 757.5 m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Florence, 1,750 (?) ft., or 472.5 (?) m.; Makawao, 2,208 ft., or 672.1 m.; Morgantown, 1,027.9 ft., or 313.3 m.; Medellin, 4,876 ft., or 1,486.2 m.; Mt. Washington, 6,285 ft., or 1,915.6 m.; North Platte, 2,846 ft., or 867.4 m.; Omaha, 1,054.6 ft., or 321.4 m.; Pike's Peak, 14,160.7 ft., or 4,313.1 m.; Salt Lake City, 4,362.2 ft., or 1,329.6 m.; Santa Fé, 6,862.2 (?) ft., or 2,091.6 (?) m.; Tucson, 2,645 (?) ft., or 775.7 (?) m.; Virginia City, 5,480 (?) ft., or 1,670.3 (?) m.; Yankton, 1,278 ft., or 389.5 m. The following constants are added in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Denver, 5.22 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fé, 6.54 in.; Tucson, 2.59 in.; Virginia City, 5.48 in. The elevation of Batavia is about 6 feet; the barometric readings need the addition of 0.2 mm. or 0.01 in. for reduction to sea-level.

UNITED STATES NAVAL SERIES.

By authority of the **SECRETARY OF THE NAVY.**

Furnished by the cooperation of the Navy Department, through Commodore Daniel Ammen, U. S. N., Chief of Bureau of Navigation.

STATIONS AND VESSELS.	True course toward—	Hourly rate in knots.	*Barometer as reported.		Temperature of the Air.		Relative Humidity.	Wind.				Clouds.				Rain-fall or melted snow in the past 24 hours.		State of Ocean.	Direction of swell from—	Weather.	Observer.
								Direction.	Velocity		Force.	Amount.		Direction.							
												Up'er	Low'r	Up'er	Low'r						
			Inches.	Millimeters.	Fahrenheit.	Centigrade.	Per cent.	From—	Miles per hour.	Meters per second.	0—10.	0—10.	0—10.	From—	From—	Inches.	Millimeters.				
Naval Academy, Annapolis, Md.			29.57	751.1	32	0.0	79	NW			1		3			0	0			Hazy	
Naval Hospital, Annapolis, Md.			29.96	761.0	34	1.1	52	W			1		3		W	0	0			Fair	
Navy Yard, Mare Island, Cal.			30.19	766.8	55.5	13.1		SW			2		6			0	0			Foggy	
Navy Yard, Norfolk, Va.			30.06†	763.5†	36	2.2	100	Calm?	10?	4.5?			8			0	0			Blue sky	
Navy Yard, Pensacola, Fla.			30.10	764.5	48	8.9	85	N	6	2.7			10		E	0	0			‡D. clouds	
Navy Yard, Portsmouth, N.H.			29.81	757.2	25	— 3.9		Calm	0	0						0	0			Hazy	
¶ Canonicus, New Orleans, La.			29.93	760.2	49	9.4	93	Calm			0		10							Cloudy	
Colorado, New York, N. Y.			29.96	761.0	41	5.0		SW	8	3.6			6		E	0	0			Hazy	
Essex, Vera Cruz, Mex.			29.99	761.7	69	20.6	100	SW			1		9		NE			Smooth		‡D. clouds	
¶ Gettysburg, Menton, France			29.68	753.9	58	14.4		ENE			2		9			Blank	Blank	Long	S	‡D. clouds	
Hartford, Hampton Roads, Va.			30.13	765.3	47	8.3		SW			1		1			0	0			Pleasant	
Huron, Charleston, S. C.			30.12	765.0	47	8.3	77	WSW			2		5							Hazy	
Lackawanna, Mare Island, Cal.			30.25	768.3	59	15.0	88	WSW			1		10					Smooth		Foggy	
Marion, Port Said, Egypt			30.07	763.8	67	19.4	84	WNW			3		0					Smooth		Blue sky	
Michigan, Erie, Pa.			29.28	743.7	43	6.1	61	SSW			2		2		S					Clear	
Monongahela, Baltimore, Md.			29.92	760.0	34	1.1		WSW			1		c							Foggy	
New Hampshire, Port Royal, S. C.			30.22	767.6	45	7.3		SW			1		4		NE					‡D. clouds	
Omaha, Panama			30.06	763.5	75	23.9	90	N			1		0			0	0	Smooth		Hazy	
Ossipee, Pensacola, Fla.			30.05	763.3	51	10.6		N			2		10		WSW					Hazy	
Pensacola, Panama			30.06	763.5	77	25.0	91	Calm			0		0			0	0			Pleasant	
Plymouth, New Orleans, La.			30.00	762.0	53	11.7	79	E			1		10							Misty	
Ranger, Hampton Roads, Va.			30.12	765.0	40	4.4		WSW			0–1		0					Smooth		Clear	
Richmond, Montevideo, Uruguay			30.12	765.0	71.0	21.7	95	SSW			3		9		SSW					‡D. clouds	
¶ Rio Bravo, Matamoras, Mex.			29.91	759.7	50	10.0		W			1		8		S					‡D. clouds	
Santee, Annapolis, Md.			30.03	762.7	37	2.8	62	NW			1		3							Hazy	
St. Louis, League Island, Pa.			29.81	757.2	35	1.7		SW	8	3.6			4		SW	0	0			Fair	
Vandalia, Constantinople, Turkey.			29.63	752.6	54	12.2	93	SW			3		5		NE					‡D. clouds	
Wabash, Boston, Mass.			29.92	760.0	30	— 1.1		SSW	2	0.9			5		NE	0	0			Hazy	
Wyoming, Washington, D. C.			30.28†	769.1†	29	— 1.7		ESE			1		2								

* It is not known that the barometer is corrected for temperature, instrumental error or elevation. † Aneroid Barometer. ‡ Detached clouds. ¶ Barometer corrected for instrumental error and reduced to sea-level.

UNITED STATES MARINE SERIES

REPORTED TO THE OFFICE OF THE CHIEF SIGNAL OFFICER OF THE ARMY.

NAMES OF VESSELS.	TRUE COURSE TOWARD—	HOURLY RATE IN KNOTS.	BAROMETER REDUCED TO SEA-LEVEL.		TEMPERATURE OF THE AIR.		RELATIVE HUMIDITY.	WIND.			CLOUDS.				STATE OF OCEAN.	DIRECTION OF SWELL FROM—	WEATHER.	OBSERVER.
								Direction.	Velocity.		Force.	Amount.		Direction.					
												Up'er	Low'r	Upper.	Lower.				
			Inches.	Millimeters.	Fahrenheit.	Centigrade.	Per cent.	From—	Miles per hour.	Meters per second.	0—10.	0—10.	0—10.	From—	From—				

PACIFIC MAIL S. S. CO. MARINE SERIES.

Furnished by the coöperation of ————, President; Williams, Blanchard & Co., Agents.

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Furnished by the coöperation of George H. Bradbury, President; T. H. Goodman, Agent.

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S. S. Nürnberg																			Capt. A. Jaeger.
S. S. Ohio																			Capt. G. Meyer.

MARINE SERIES. (Miscellaneous.)

Furnished by the coöperation of the Observer named.

Schooner Addie Fuller, N. 36°, 50', W. 74°, 34'	NEbyN	2	29.92	760.0	53	11.7	67	N	6	2.7		0	0			Smooth		Clear	Capt. James Jorgensen

NOTE.—The schooner Addie Fuller gives the amount of cloudiness by the scale 0 to 4.

COLLATED AT THE OFFICE OF THE CHIEF SIGNAL OFFICER OF THE ARMY, WASHINGTON, D. C.

The records which appear in this Bulletin are copied from the regular exchanges of this office, made in each instance in compliance with an especial request and are published for the uses of the coöperating observers. The barometric readings in the first two columns are reduced to freezing and their respective standards; those in the second two also to mean sea-level. The "weather" is generally published as given.

When the distinction between the upper and lower strata of clouds is not reported, the *kinds* or *types*, viz: cirrus, cumulus, stratus, nimbus, scud, fracto, pallio, haze, fog and smoke, as indicated, respectively, by the letters c, k, s, n, d, f, p, hz., fg. and sm'e, are generally published with the amount in the lower-cloud column. The distinction between the upper and lower strata is carefully made in the United States Series and a portion of the Canadian Series, and the types are indicated by the above letters or their combinations in the proper column.

Albert J. Myer

Brig. Gen. (Bvt. Assg^d.,) Chief Signal Officer, U. S. A.

BULLETIN

OF

INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON FEBRUARY 23, 1877.

7:35 A. M. WASHINGTON mean time.

6:7 A. M. MEXICO mean time.
7:7 A. M. SAN JOSE mean time.
0:6 P. M. LISBON mean time.
0:28 P. M. MADRID mean time.
0:43 P. M. GREENWICH mean time.
0:53 P. M. PARIS mean time.
1:1 P. M. BRUSSELS mean time.
1:4 P. M. UTRECHT mean time.
1:18 P. M. BERNE mean time.
1:20 P. M. CHRISTIANIA mean time.

1:33 P. M. COPENHAGEN mean time.
1:38 P. M. ROME mean time.
1:37 P. M. BERLIN mean time.
1:49 P. M. VIENNA mean time.
1:55 P. M. STOCKHOLM mean time.
2:18 P. M. ATHENS mean time.
2:39 P. M. CONSTANTINOPLE mean time.
2:44 P. M. ST. PETERSBURG mean time.
6:36 P. M. CALCUTTA mean time.
10:2 P. M. TOKEI mean time.

ALGERIAN SERIES.

Furnished by the coöperation of General d'Eudeville, Commandant Supérieur du Génie in Algeria.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Nemours			29.95	760.6	61.0	16.1		NW			2		2			0	0	Clear	Michel.
Algiers			29.86	758.5	58.8	14.9		W			1		2			0.012	0.3	Clear	Biscarrat.
La Calle			29.85	758.3	51.8	11.0		W			5		8			0.051	1.3	Cloudy	Fleury.
Tunis			29.88	758.9	53.8	12 1		W			5		6			0	0	Fair	Jacques.
Saida																			
Tebessa			29.88	759.0	44.8	7.1		NNE			2		7			Inap.	Inap	Cloudy	Millot.
Gerlville			29.89	759.3	45.3	7.4		W			4		2			0.039	1 0	Clear	Bourgeois.
Laghouat			29.87	758.6	46.8	8.2		NNW			4		5			0	0	Fair	Lemaillot.
Biskra			29.91	759.7	55.6	13.1		W			6		2			0	0	Clear	Guyot.
			29.92	760.0	64.9	18.3		NW			4		6			0.039	1.0	Fair	Kuntz.

NOTE.—In the originals the distinction between the amount of upper and lower clouds is apparently not made. The weather is published as given. The rain-fall is measured at 7 a. m., local time.

AUSTRIAN SERIES.

Furnished by the coöperation of Professor Dr. Julius Hann, Director of the Imperial and Royal Central Meteorological Institute at Vienna.

Agram			29.63	752.5	39.7	4.3	70	SW			1		10			0	0		Prof. Ivan Stosir.
Cracow, I. R. Observatory			29.60	751.8	32.0	0.0	92	W			2		10			0.346	8.8		Dr. Wierzbiski.
Eperies			29.50	749.2	34.5	1.4	85	NW			2		10			0.472	12.00		Julius Mikolik.
Gratz	28.36	720.4	29.63	752.7	39.7	4.3	40	NW			5		0			0	0		Andreas Rospini.
Hermannstadt	28.01	711.5	29.44	747.8	41.4	5.2	80	NW			1		10			0.413	10.50		Prof. Reissenberger.
Kremsmünster	28.34	719.8	29.72	754.9	34.2	1.2	78	WNW			3		8			0.031	0.8		Prof. C. Wagner.
Lemberg			29.41	747.1	31.6	— 0.2	96	NE			1		10			0.524	13.3		Dr. T. Stanecki.
Nyiregyhaza																			Habasuda Daniel.
Pola			29.55	750.5	46.4	8.0	64	NNE			3		9cks			0	0		I.R. Hydrographic Office.
Szegedin			29.50	749 2	47.7	8.7	68	N			1		10			0.026	0.65		Karl Stancel.
Trieste			29.60	751.9	45.7	7.6	39	NE			2		10			0	0	Cloudy	Prof. V. Faroli.
Vienna			29.68	753.9	37.6	3.2	50	NNW			2		10			0	0		I. R. Central Met. Obs'y.

NOTE.—*The originals give, occasionally,* the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 7 p. m., local time. The elevation of Gratz is 343.5 meters, or 1,126.9 feet; Hermannstadt, 407.8 meters, or 1,337.9 feet; Kremsmünster, 383.6 meters, or 1,258.5 feet.

BELGIAN SERIES.

Furnished by the cooperation of J. C. Houzeau, Director of the Royal Observatory at Brussels.

Arlon			29.67	758.8	32.5	0.3	86	WNW			0		10			0	0		Royal Observatory.
Brussels			29.85	758.1	39.2	4.0	79	W			1	9k	8k	N	W	0.008	0.20		
Furnes			29.85	758.1	39.9	4.4	83	NNW			2		4			0.063	1.6		
Maeseyck			29.83	757.6	36.9	2.7	82	NNW			2		10			0.016	0 4		

NOTE.—In the originals, the weather is occasionally given in general notes.

BRITISH SERIES

Furnished by the coöperation of Robert H. Scott, Esq., Director of the Meteorological Office, London, Alexander Buchan, Secretary of the Scottish Meteorological Society, Edinburgh, and the respective Observers.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Aberdeen			29.93	760.2	40.9	4.9		NW	15	6.7			4			0.185	4.80	Blue sky	William Boswell.
Ardrossan			30.00	762.0	46	7.8		NW			3		6					*D. clouds	William McNeil.
Armagh, Observatory			30.11	764.8	46.4	8.0		W	4	1.8			10					Overcast	S. Call, for Dr. Robinson.
Bidston (Liverpool Obs.)			30.02	762.5	44.9	7.2		NNW	15	6.7			1					Blue sky	John Hartnup.
Birr Castle, (Parsonstown)			30.17	766.3	48.3	9.1		WNW			1–3		10					Overcast	J. Dreyer.
Bradford			29.96	761.0	42.8	6.0		NW			3		7			0.02	0.5	*D. clouds	J. McLandsborough.
Bridgetown, (Barbados)			30.00	762.0	82.0	27.8		NE			1		4					*D. clouds	Sergt. J. F. Halanen, A.
Cambridge, Observatory			29.95	760.7	42.0	5.6		N			2		7			Blank	Blank	*D. clouds	H. Todd. [H.C.
Cardington			29.97	761.2	43.4	6.3		N			2		8					Overcast	John McLaren.
Carlisle																			T. Bell, for J. Cartmell.
Chatham, School M. E.			30.01	762.2	40.2	4.6		NE			2		6					Blue sky	Maj. C. N. Martin, R.E.
Dartmoor	28.58	725.9	30.14	765.5	37.0	2.8		N			4		6					*D. clouds	R. E. Power.
Davos Platz, (Switzerland)	24.43	620.5			21.0	— 6.1	49	NE			1		7			0.004	0.10	*D. clouds	Francis Redford, M. A.
Donaghadee			30.05	763.3	47	8.3		WNW			5		8					*D. clouds	J. Mac Gowan.
Dover			29.99	759.4	41	5.0		N			3		6					Showery	J. Costello.
Eccles, (near Manchester)			29.99	761.7	45.7	7.6		N	2.0	0.9			5					*D. clouds	Thomas Mackereth.
Falmouth, Observatory			30.11	764.8	46.0	7.8		NNW			4		5					*D. clouds	The Staff.
Fort Napier, (Natal)	27.64	702.2	29.87	758.7	88.8	31.6		W			3		8					Overcast	P'vt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.83	757.7	87	30.6		N			0		5					*D. clouds	
Galway, Queen's College			30.13	765.3	50	10.0		NW			1		3					*D. clouds	Prof. A. H. Curtis.
Gibraltar, (Mediterranean)			29.97	761.2	62.1	16.7		NW			3		0					Blue sky	Corpl. C. Aitken, A.H.C.
Glasgow, Observatory			29.99	761.7	42.9	6.1		WNW			1		9					*D. clouds	Lewis Stuart.
Great Yarmouth			29.91	759.7	40	4.4		NNE			2		4					*D. clouds	G. T. Watson.
Greenwich, Royal Obs'y			29.95	760.7	42.3	5.7		N			2		9			Blank	Blank	*D. clouds	The Staff, for G. B. Airy.
Guernsey			29.97	761.2	43	6.1		NNW			4		8n					*D. clouds	Dr. S. E. Hoskins.
Helston			30.10	764.5	47	8.3		N			6		6n					Showery	M. P. Moyle.
Holyhead			30.06	763.5	45	7.2		NNW			4		3					*D. clouds	John Tilston.
Kew, Observatory			29.96	761.0	42.5	5.8		N	15	6.7			8					Threatening	The Staff.
Kingstown			30.13	765.3	45	7.2		NW			4		10					Overcast	George Mitchell.
Leicester Museum			29.97	761.2	41.7	5.4		NW			2		10					Misty	Wm. J. Harrison, F.G.S.
Malta, (Mediterranean)			29.96	761.0	55.0	12.8		N			3		8k					*D. clouds	Corp'l. P. Bravis, A.H.C.
Nairn			29.92	760.0	43	6.1		W			4		5					½ clouded	W. D. Penny.
Nassau, (Bahamas)			29.94	760.5	66.4	19.1		SE			1		10			hail	Hail	Squally	Surg. Maj. Henry.
Nottingham, Observatory			29.98	761.5	41.7	5.4		NNE			4		8k.ks,d		NNE	0.00	0.08	*D. clouds	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			30.00	762.0	42.0	5.6		N			4		9					*D. clouds	Rev. Stephen Whitty.
Oxford, Radcliffe Obs'y			29.98	761.5	43	6.1		N			1		10			Blank	Blank	Overcast	J. Lucas.
Plymouth			30.05	763.3	46.7	8.2		N			3		8					*D. clouds	John Merrifield.
Roche's Point			30.16	766.1	49	9.4		N			5		5					½ clouded	W. Kennedy.
Saint Ann's Head			30.08	764.0	47	8.3		N			5		5					*D. clouds	John C. Walker.
Saint Helier, (Jersey)			29.96	761.0	44.6	7.0		NE			5		10					Overcast	A. P. Amy.
Sandwick Manse, (Orkneys)			29.83	757.7	41	5.0		WNW	20	8.9			10					Drizzling	Rev. C. Clouston, LL. D.
Scarborough																			F. Shaw.
Scutari Cemetery, (Turkey)			29.68	753.9	50.8	10.4		SW			2		5			Blank	Blank	*D. clouds	Sergt. W. H. Lyne.
Sheffield			29.98	761.5	43.3	6.3		N			2		10			0	0	Overcast	W. F. Cooper.
Silloth Rectory			29.98	761.5	49.9	9.9	66	NW			1		3			0	0	*D. clouds	Rev. Francis Redford.
Stonyhurst, Observatory			30.09	762.0	43.2	6.2		N			3		6					*D. clouds	Rev. S. J. Perry.
Stornoway, Lewis C., (Hebr.)			29.80	759.2	40	4.4		WNW			1		10					Drizzling	John Smith.
Stratfield Turgiss			29.96	761.0	44.1	6.7		N			1		8					*D. clouds	Rev. Charles H. Griffith.
Thurso			29.85	758.2	42	5.6		WNW			3		8					Overcast	John Trotter.
Truro, Royal Institution			30.08	764.0	48	8.9		N			6		6					*D. clouds	W. Newcombe.
Valencia, Observatory			30.29	769.4	49.2	9.6		NNW	15	6.7			10					Drizzling	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man)																			Henry Mercer.
Cape Good Hope, Obs'y			29.98	761.5	86.0	30.0	40	SSE	6	2.7		0	0						The Staff, for E. J. Stone.
Hobart Town, (Tasmania)			29.84	757.9	61.0	16.1	87	NW			1		5k			0.01	0.3		Francis Abbott, F.R.A.S.
Leith, Restalrig Park			29.99	761.7	45.0	7.2		NW			2	8ck		N		0.02	0.5	Cloudy	Andrew Gibb.
Mauritius, Observatory			30.06	763.5	78.5	25.8	73	ESE	18.3	8.2		3	6		E	0.01	0.3	Cloudy	C. Meldrum.
Melbourne, Observatory			30.19	766.8	58.1	14.5	71	WSW	15	6.7			6		SW	0.11	2.8	Fine	R. L. J. Ellery.
Monach L't-house, (Hebrides)																			J. Yourgclause.
North Unst, (Shetland Is.)																			Robert Burnet.

Note.—Generally, the originals do not give the relative humidity, rain-fall, or distinction between upper and lower clouds. The originals give the wind direction to 32 points and weather by the Beaufort notation. The originals give the barometer for Aberdeen, Cardington, Fleetown, Galway, Oxford, St. Helier, Sandwick, Scarborough, Stonyhurst, Leith, Monach and North Unst as read off and the amount of cloudiness for Stornoway by the scale 0 to 4. The wind-force is given by the scale 0 to 12 in the official series; 0 to 6 in the sub-series; except in lbs. per square foot for Greenwich and Hobart Town. The rain-fall is measured at Aberdeen at 10 a. m.; Bradford, 9 a. m.; Hobart Town, 7:30 a. m.; Nottingham, 6 p. m.; Mauritius, 9 a. m., local time. The elevation of Dartmoor is 1,460 feet, or 426.7 meters; Davos Platz, 5,167 feet, or 1,576.6 meters; Fort Napier, 2,200 feet, or 670.6 meters. *Detached clouds.

By authority of the Minister of Foreign Affairs.

COSTA RICA SERIES.

Furnished by the coöperation of Senor Federico Maison, Director of the Central Office of Statistics and Meteorology.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
San José																			

DANISH SERIES.

Furnished by the coöperation of Captain N. Hoffmeyer, Director of the Royal Danish Meteorological Institute at Copenhagen.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Copenhagen			29.61	752.1	31.6	— 0.2	89	NNW			2		10						
Fanöe			29.73	755.1	34.5	1.4	74	N			2		9						
Godthaab, (Greenland)			29.74	755.5	30.7	— 0.7		Calm			0		10					Snowing	
Stykkisholm, (Iceland)			29.50	749.3	34.0	1.1	96	SW			7		8						
Thorshavn, (Faröe)			29.51	749.5	40.5	4.7	92	SW			5		10					Snowing	
Vestervig			29.65	753.0	33.1	0.6	89	NNW			4		8						

Note.—The originals give the wind-force by the scale 0 to 6; occasionally, weather by Vienna symbols; no distinction between the amount of upper and lower clouds.

FRENCH SERIES.

Furnished by the co operation of His Excellency, U. J. Le Verrier, Director of the Paris Observatory, and the respective Observers.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. Fr m—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather	Observer.
Alençon	.....	.....	29.94	760.4	46.4	8	83	W	.....	.....	2	.....	10kn	.....	W	0	0	Covered	Normal School.
Amiens	.....	.....	29.88	759.0	46.8	8.2	88	NE	.....	.....	2	.....	5	.....	NE	0.157	4.0	Cloudy.....	Normal School.
Avignon	.....	.....	29.69	754.0	46.4	8	82	N	.....	.....	4	.....	0	.....	.....	0	0	Very clear..	Normal School.
Bar-sur-Seine	.....	.....	29.84	758.0	40.5	4.7	70	NW	.....	.....	2	.....	8n	.....	NE	Inap.	Inap.	Very cloudy	C. Saillard.
Beaumette, (near Angers)	.....	.....	29.83	757.6	43.7	6.5	67	N	32.7	14.6	.....	.....	.....	.....	N	0.256	6.5	.....	Beaumette Observ'tory.
Beauvais	.....	.....	29.90	759.4	37.8	3.2	80	NNE	.....	.....	2	.....	10	.....	NNE	0.069	2.25	Covered	Normal School.
Besançon	.....	.....	29.82	757.3	40.5	4.7	69	E	.....	.....	3	.....	2	.....	NNE	0	0	Slightly cl'dy	Normal School.
Bourg en Bresse	.....	.....	29.78	756.5	39.6	4.2	54	NE	.....	.....	6	.....	5cn	.....	SE	0	0	Cloudy.....	Normal School.
Bourges	.....	.....	29.84	757.8	40.3	4.6	97	N	.....	.....	4	.....	10	.....	NNW	0.055	1.4	Covered	Normal School.
Brest	.....	.....	29.98	761.5	45.1	7.3	69	NNE	.....	.....	5	.....	9	.....	NNE	0.069	1.75	.....	Naval Observatory.
Carcassonne	.....	.....	29.71	754.6	41.2	5.1	75	NW	.....	.....	1	.....	10	.....	SE	0.08	2.	Covered	Normal School.
Caen	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Chartres	.....	.....	29.80	757.0	38.5	3.6	93	NE	.....	.....	2	.....	6	.....	SW	0	0	.....	Normal School.
Châlons-sur-Marne	.....	.....	29.86	758.4	35.2	1.8	93	N	.....	.....	3	.....	10	.....	.....	0.126	3.2	Misty.....	Normal School.
Clermont	.....	.....	29.78	756.4	37.8	3.2	90	W	.....	.....	1	.....	10	.....	NW	0	0	.....	Puy de Dome Obs'y.
Commercy	.....	.....	29.81	757.2	34.7	1.5	89	W	.....	.....	2	.....	8kn	.....	W	0	0.	Very cloudy	Normal School.
Commune de Gréasque*	.....	.....	29.64	752.9	44.1	6.7	42	W	.....	.....	2	.....	2	.....	W	0	0	.....	M. Kina.
Grenoble	.....	.....	29.78	756.4	36.5	2.5	72	NE	.....	.....	2	.....	5kn	.....	SW	0	0	Cloudy.....	Normal School.
La Roche-sur-Yon	.....	.....	29.83	757.7	41.7	5.4	81	NNE	.....	.....	8	.....	8	.....	W	0.055	1.4	Very cloudy	Normal School.
Le Mans	.....	.....	29.89	759.1	40.3	4.6	74	NE	.....	.....	4	.....	5	.....	NE	0	0	Cloudy.....	Normal School.
Lons-Le-Saulnier	.....	.....	29.75	755.6	37.6	3.1	50	ENE	.....	.....	2	.....	0	.....	.....	0	0	Clear.....	Normal School.
Lorient	.....	.....	29.98	761.4	46.8	8.2	89	N	.....	.....	6	.....	5	.....	N	0.039	1.0	Cloudy.....	Naval Observatory.
Mâcon	.....	.....	29.78	756.3	37.9	3.3	71	W	.....	.....	1	.....	5	.....	N	0	0	Cloudy.....	Normal School.
Metz	.....	.....	29.88	759.0	36.5	2.5	75	N	.....	.....	2	.....	9k	.....	.....	0	0	.....	M. Schuster.
Mirecourt	.....	.....	29.82	757.3	36.7	2.6	79	NNW	.....	.....	2	.....	10	.....	SSE	0	0	Covered	Normal School.
Nismes	.....	.....	29.68	753.8	48.9	9.4	54	N	.....	.....	2	..c	.....	N	.....	0	0	.....	Normal School.
Orleans	.....	.....	29.81	757.1	39.2	4	80	N	.....	.....	4	.....	10	.....	N	0.126	3.2	Covered	Normal School.
Paris, Observatory	.....	.....	29.87	758.7	36.7	2.6	86	NNE	.....	.....	2	.....	10k	.....	N	0.061	1.54	Foggy.....	National Observatory.
Parthenay	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Privas	.....	.....	29.74	755.5	42.8	6	54	WNW	.....	.....	4	.....	2	.....	WNW	0	0	Slightly cl'dy	Normal School.
Rochefort, Observatory	.....	.....	29.80	757.0	42.3	5.7	84	NNW	.....	.....	7	.....	10	.....	S	0	0	Covered	Naval Observatory.
Rouen	.....	.....	29.88	758.9	41.2	5.1	74	NNW	.....	.....	2	.....	2	.....	N	0.322	8.2	Slightly cl'dy	Normal School.
Saint Lo	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Tarbes	28.93	734.7	29.64	752.8	38.3	3.5	97	W	.....	.....	2	.....	10	.....	.....	0.08	2.	Covered.....	Normal School.
Villefranche	.....	.....	29.77	756.2	41.0	5	80	E	.....	.....	2	.....	5	.....	N	0	0	Cloudy.....	Normal School.
SUB-SERIES.																			
Fort de France, Martinique	.....	.....	29.91	759.6	77.4	25.2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	L'Abbé Marchési.
Marseilles	.....	.....	29.61	752.2	46.9	8.3	55	NW	.....	.....	2	.....	3	.....	.....	0	0	Partly cl'dy.	Marseilles Observatory.
Mont-Louis	24.42	620.3	29.74	755.3	29.0	— 5.0	73	WSW	5.6	2.50	.....	.....	10	.....	.....	0.327	8.3	.....	—. Falguère.
Montsouris, Paris	.....	.....	29.85	758.2	36.5	2.5	89	N	.....	.....	3	.....	10	.....	N	0.071	1.8	Misty	Montsouris Observatory
Perpignan	.....	.....	29.73	755.1	39.2	4.0	70	E	5.6	2.50	.....	.....	10	.....	NW	0	0	.....	Dr. Fines.
Pic du Midi, (Summit,) H. P.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. Baylac.
Pic du Midi, (Plantade,) H. P.	21.98	558.4	.....	.....	13.1	—10.5	.....	N	.....	.....	8–10	.....	10	.....	.....	1.201	30.5	Snowy.....	General de Nansouty.
Saint Maur, (near Paris)	.....	.....	29.80	758.4	37.4	3.0	91	N	.....	.....	1	.....	10	.....	.....	0.130	3.3	Covered	E. Renou.
Toulouse	.....	.....	29.73	755.1	38.7	3.7	78	SE	.....	.....	1	.....	9	.....	.....	Inap.	Inap.	.....	Toulouse Observatory.
Tours	.....	.....	29.86	758.5	42.4	5.8	70	NE	.....	.....	2	.....	7	.....	NNE	0.150	3.8	.....	C. Marquet.
Versailles, (near Paris)	.....	.....	29.87	758.6	37.4	3.0	86	NE	.....	.....	2	.....	10	.....	.....	0.165	4.18	Covered	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai)	.....	.....	30.43	772.9	36.1	2.3	82	NNW	14.1	6.3	.....	.....	10	.....	.....	0.039	1.0	.....	Marc Dechevrens, S. J.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—Generally, the originals give the wind-force by the scale 0 to 7; no distinction between upper and lower clouds, and, in the official series, the amount by the scale 0 to 4; the rain-fall as measured at 7, 8 or 9 a. m., local time; at Clermont, 9 a. m. of the following day; the weather in general terms as published. The elevation of Clermont is 388 meters, or 1,272.9 feet; Commune de Gréasque, 322 meters, or 1,056.4 feet; Tarbes, 308 meters, or 1,010 feet; Mont-Louis, 1,586.40 meters, or 5,204.8 feet; Pic du Midi, (Summit,) 2,877 meters, or 9,439.1 feet; Pic du Midi, (Plantade,) 2,366 meters, or 7,762.6 feet. In correcting the Mont-Louis barometric observations for altitude, the constant 185. millimeters has been added. *Bouches-du-Rhône

GERMAN SERIES.

Furnished by the coöperation of Professor Dr. G. Neumayer, Director of the German Naval Observatory, Hamburg.

Bamberg	.....	.....	29.75	755.7	36.5	2.5	56	NW	.....	.....	3	.....	6	NW	.....	0	0	.....	Prof. T. Hoh.
Berlin	.....	.....	29.72	754.8	37.4	3.0	70	NW	.....	.....	2	.....	8	.....	.....	0.268	6.8	.....	Prof. Arndt.
Breslau	.....	.....	29.66	753.4	33.6	0.9	81	WNW	.....	.....	2	.....	10	NW	.....	0	0	.....	Royal University Obs'y.
Carlsruhe	.....	.....	29.78	756.5	38.8	3.8	88	SW	.....	.....	1	.....	9	.....	.....	0	0	.....	A. Senz.
Cassel	.....	.....	29.78	756.3	34.5	1.4	77	NNW	.....	.....	4	.....	6	W	.....	0	0	.....	Dr. H. Möhl.
Crefeld	.....	.....	29.80	756.9	37.9	3.3	75	W	.....	.....	3	.....	9	.....	.....	0.08	2.	.....	Director Lose.
Emden	.....	.....	29.88	759.0	34.9	1.6	86	N	.....	.....	2	.....	2	.....	.....	0	0	.....	Prof. Prestel.
Frankfort on the Main	.....	.....	29.85	758.2	39.0	3.9	74	SW	.....	.....	1	.....	9	.....	.....	0	0	.....	Physical Society.
Friedrichshafen	26.34	719.8	29.82	757.3	35.2	1.8	72	SSW	.....	.....	4	.....	8	.....	.....	0.024	0.6	Snowing.....	M. Wilhelm.
Hamburg	.....	.....	29.73	755.2	33.1	0.6	90	WNW	.....	.....	4	.....	10	.....	.....	0.043	1.1	Snow & fog..	Captain F. Hegemann.
Kiel	.....	.....	29.69	754.1	34.3	1.3	83	NW	.....	.....	2	.....	10	.....	.....	0	0	.....	Prof. G. Karsten.
Königsberg, (Prussia)	.....	.....	29.54	750.4	33.6	0.9	84	NE	.....	.....	2	.....	9	.....	.....	0.035	0.9	Snowing.....	Prof. E. Luther.
Köslin	.....	.....	29.63	752.5	34.0	1.1	.....	W	.....	.....	2	.....	10	.....	.....	0	0	.....	H. Müller.
Leipsic	.....	.....	29.76	755.8	35.1	1.7	62	NW	.....	.....	2	.....	8	W	.....	0.083	2.1	....	Prof. Bruhns.
Memel	.....	.....	29.59	751.6	33.8	1.0	81	Calm	.....	.....	0	.....	8ks	.....	.....	0.008	0.2	Smoke-haze.	Reinbrecht & Skalweit.
Münster	.....	.....	29.74	755.5	37.0	2.8	78	NW	.....	.....	2	.....	10	.....	.....	0	0	.....	Prof. E. Heis.
Neufahrwasser	.....	.....	29.58	751.3	35.2	1.8	91	Calm	.....	.....	0	.....	10	.....	.....	0.016	0.4	Light fog.....	A Lothe.
Posen	.....	.....	29.65	753.0	33.8	1.0	98	NW	.....	.....	5	.....	6	.....	.....	0	0	.....	Dr. Magener.
Strassburg, (in Alsace)	.....	.....	29.82	757.4	36.9	2.7	65	Calm	.....	.....	0	.....	3	NW	.....	.....	.....	Snowing.....	Dr. Schur.
Stuttgart	.....	.....	29.79	756.7	35.0	2.0	61	NE	.....	.....	1	.....	5	.....	.....	0.051	1.3	.....	Prof. Schoder.
Thorn	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Dr. Hasenbalg.
Treves, (Trier)	.....	.....	29.71	754.6	40.1	4.5	63	NE	.....	.....	2	.....	8	.....	.....	0.008	0.2	.....	Prof. Flesch.
Weissenburg, (Bavaria)	26.19	716.0	29.73	755.2	36.1	2.3	77	W	.....	.....	1	.....	10	W	.....	Inap.	Inap.	.....	Dr. von Bebber.
Wustrow, Naval School	.....	.....	29.73	755.1	33.8	1.0	88	W	.....	.....	3	.....	10	.....	.....	0	0	.....	E. F. Schütz.
GERMAN NAVAL SERIES.																			
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—The elevation of Friedrichshafen is 413.4 meters, or 1,356.3 feet; Weissenburg, 431 meters, or 1,414.0 ft. In the originals the distinction between the amount of upper and lower clouds is not made. It is not always certain that the remarks in the weather column refer to the moment of observation.

GREEK SERIES.

Furnished by the coöperation of Professor Dr. J. F. Julius Schmidt, Director of the Royal Observatory at Athens.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Athens			29.78	756 4	59 7	15.4		SE										Clear	

Note.—The originals give the barometer corrected, but not reduced to sea-level; occasionally the kind of clouds; the weather as published. They omit the humidity, wind-force, amount of cloudiness and rain-fall.

INDIAN SERIES.

Furnished by the coöperation of H. F. Blanford, Meteorological Reporter to the Government of India.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Kurrachee																			
Deesa																			
Bombay																			
Poona																			
Lahore																			
Belgaum																			
Bangalore																			
Rorkee																			
Agra																			
Trichinopoly																			
Nagpur																			
Madras																			
Lucknow																			
Allahabad																			
Patna																			
Hazaribagh																			
Cuttack																			
Calcutta (Alipore)																			
Goalpara																			
Chittagong																			
Sibsagar																			
Rangoon																			
Jubbulpore																			

ITALIAN SERIES.

Furnished by the cooperation of His Excellency the Minister of Agriculture, Industry and Commerce, and the respective Observers.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Udine			29.58	751.4	45.5	7.5	38	SE	3.1	1.4		9				0	0		Prof. Giovanni Clodig.
Stelvio	21.61	548.8			7.7	—13.5		SE			1	0				0	0		Signora Ernesta Manfredi.
Valdobbia	21.65	549.8			14.9	— 9.5	71	W			2	1		NNE		0	0		Ab. Dom. Mongini.
Padua			29.58	751.4	47.5	8.6	34	E	4.3	1.9		5				0	0		Prof. Dott. Lorenzoni.
Vicenza			29.60	751.8	46.9	8.3	33	NE	4.3	1.9		3		W		0	0		Conte Alm. Da Schio.
Verona			29.59	751.5	46.4	8.0	89	E			1	10				0	0		Dott. B. Bertoncelli.
Bergamo	28.25	717.6	29.59	751.6	44.6	7.0	47	SW			4	3				0	0		Prof. Trionfini Carlo.
Domodossola			29.60	751.7	47.5	8.6	17	Calm			0	0				0	0		Prof. Giuseppe Calza.
Milan			29.63	752.5	46.4	8.0	55	NNW			1	1				0	0		Ab. Gio. Capelli
Pavia			29.61	752.1	45.3	7.4	46	SE			4	0				0	0		Prof. Gio. Cantoni.
Moncalieri			29.62	752.4	46.4	8.0	29	WSW	0.7	0.3		1				0	0		Prof. P. F. Denza.
Mondovi	27.68	703.1	29.62	752.4	41.5	5.3	29	NNW			4	0				0	0		Prof. D. C. Bruno.
Porto Maurizio			29.64	752.9	51.3	10.7	35	SW			2	4				0	0		Prof. L. Vassallo.
Genoa			29.59	751.5	53.4	11.9	23	N	4.9	2.2		0				0	0		Prof. G. M. Garibaldi.
Piacenza			29.62	752.4	45.0	7.2	43	ESE	4.3	1.9		1				0	0		Dott. G. Manzi.
Parma			29.61	752.0	47.5	8.6	60	SSE			2	1				0	0		Prof. P. Pigorini.
Florence			29.63	752.5	47.8	8.8	46	N			4	8				0	0		Cav. F. Meucci.
Leghorn			29.57	751.1	50.4	10.2	37	E	7.4	3.3		5		NNE		0	0		Prof. P. Monte.
Siena	28.35	720.2	29.59	751.5	45.0	7.5	62	WSW	0	0		9		N		0	0		Prof. L. Toscani.
Urbino	28.01	711.5	29.61	752.1	38.8	3.8	73	NE			2	10				0.400	10.3		Prof. P. Serpieri.
Pesaro			29.59	751.6	44.6	7.0	71	WNW	26.2	11.7		10		NW		0.157	4.0		Prof. Luigi Guidi.
Ancona			29.58	751.2	43.9	6.6	81	N			4	10		NW		0.427	10.8		Prof. F. De— Bosis.
Grosseto			29.60	751.7	50.7	10.4	58	NW			2	6		NE		0	0		Avv. P. Pontidelli.
Rome			29.54	750.4	51.8	11.0	50	NNW	8.1	3.6		8		W		0.07	1.8	Raining	Prof's. P. Secchi & L. Respighi
Naples, O. U			29.54	750.2	48.6	9.2	76	WSW			6	10		SW		0.43	11 1	Raining	Prof. L. Palmieri.
Lecce			29.65	753.2	52.8	11.6	54	NNW	21.7	9.7		10				0	0		Prof. C. De—Giorgi.
Cosenza			29.71	754.5	45.0	7.2	83	NE	9.4	4.2		10				1.56	39.8	Heavy rain.	Prof. F. D. Conti.
Cagliari			29.68	753.9	50.0	10.0	50	NW			4	2		NW		0.07	2.0	Raining	Prof. A. Pacinotti.
Riposto, (Sicily)			29.66	753.4	57.2	14.0	51	E			2	5		SE		0	0		Prof. F. Cuffero.
Palermo			29.66	753.3	52.0	11.6	51	WSW	11.9	5.3		9		WSW		0.20	5.3	Raining	Prof. G. Cacciatore.
Caltanissetta	27.77	705.3	29.76	755.8	44.1	6.7	74	WSW			6	10		E		0.35	9.1	Rain & snow	Prof. A. Pagani.
Siracusa			29.69	754.2	54.7	12.5	58	WSW			6	7		W		0	0		Prof. V. Giuliano.
Sun-Series.																			
Naples, S. R.			29.56	750.9	45.0	7.2	83	WNW	0.7	0.3		10		NW		0.311	8.1		Prof. F. Brioschi.

Note.—The originals give the wind-force by the scale 0 to 4, or the velocity in kilometers per hour; generally, no distinction between upper and lower clouds; occasionally the weather by the Vienna symbols. The elevation of Stelvio is 2,543.0 meters, or 8,342.9 feet; Valdobbia, 2,548.0 meters or 8,359.3 feet; Bergamo, 379.6 meters, or 1,245.3 feet; Mondovi, 556 meters, or 1,824.2 feet; Siena, 348.5 meters, or 1,143.3 feet; Urbino, 451 meters, or 1,479.7 feet; Caltanissetta, 570.3 meters, or 1,871.0 feet.

JAPANESE SERIES.

Furnished by the coöperation of the Imperial University of Tokei, Japan.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Tokei																			Prof. P. V. Vecdor.

Note.—The originals give the amount of cloudiness by the scale 0 to 4 without distinguishing between upper and lower clouds. The rain-fall is measured at 7 a. m., local time.

By authority of the SECRETARY OF PUBLIC WORKS.

MEXICAN SERIES.

Furnished by the coöperation of Senor Mariano Barcena, Director of the Central Meteorological Observatory in the City of Mexico.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Mexico																			Mariano Barcena.
																			Vicente Reyes.
																			Miguel Perez.

NOTE.—The elevation of Mexico is 2,290 meters, or 7,512.9 feet. The rain-fall is measured at 6 a. m., local time. (Engineers in charge.)

NETHERLANDS' SERIES.

Furnished by the cooperation of Professor Buys Ballot, Director of the Royal Meteorological Institute of the Netherlands at Utrecht.

Flushing			29.89	759.2	37.9	3.3		NNE			2					0.188	3.5		
Groningen			29.74	755.5	37.8	3.2										0.051	1.3		
Helder			29.82	757.5	39.2	4.0		N			4					0.122	3.1		
Utrecht			29.80	756.9	40.3	4.6	77	WNW			2		8			0.028	0.7	Very cloudy	

NOTE.—The originals give the wind-pressure in idlograms per square meter; for Utrecht, they give the weather as published, from which the amount of cloudiness is taken by the scale 0 to 4, without distinguishing between upper and lower clouds. It is assumed that the barometer readings have been reduced to sea-level.

NORWEGIAN SERIES.

Furnished by the cooperation of Professor H. Mohn, Director of the Royal Norwegian Meteorological Institute at Christiania.

Bergen			29.73	755.2	32.0	0.0	74	SSE	3.1	1.4			10			0.016	0.4		
Bröno			29.61	752.1	26.6	— 3.0	70	E	6.7	3			8			0	0		
Christiania			29.68	753.9	23.9	— 4.5	79	ENE	0	0			3			0	0		
Tromsö			29.70	754.3	15.1	— 9.4	62	SE	4.5	2			0			0	0		

NOTE.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols. The cloudiness and weather at Bergen refer to 2h., p. m., local time, instead of 1h., 4 min.

PORTUGUESE SERIES.

Furnished by the cooperation of J. C. de Brito Capello, Director of the Meteorological Observatory of the Infante Don Luiz at Lisbon.

Angra, (Azores)			30.52	775.1	54.7	12.6	81	E	15.4	6.9			8			0	0		Dr. J. A. Sampaio
Campo Major			30.00	762.0	55.4	13.0	39	NNW	13.0	5.8			3			0	0		Dr. A. M. R. dos Santos.
Funchal, (Madeira)			30.20	767.0	59.2	15.1	68	ENE	7.4	3.3			10			0.047	1.2	Rain & fog	Capt. D. A. de Cunha.
Lisbon			30.12	765.0	55.2	12.9	59	N	21.0	9.4			9			0	0		The Observatory.
Ponta Delgada, (Azores)			30.50	774.6	58.5	14.7	52	ESE	3.8	1.7			3			0	0		

NOTE.—The originals give the wind-velocity in kilometers per hour, occasionally, the weather by the Vienna symbols; the amount of cloudiness without distinguishing between upper and lower clouds; the barometer corrected but not reduced to sea-level. The rain-fall at Libson is measured at noon, instead of 0 h. 6 m., p. m.

RUSSIAN SERIES.

Furnished by the cooperation of Professor H. Wild, Director of the Imperial Central Physical Observatory of Russia, at St. Petersburg.

Warsaw			29.53	750.1	34.0	1.1	89	NNW	7	3			10					Light snow	Astronomical Obs.
Wilna			29.53	750.0	30.9	— 0.6	85	E	2	1			10					Snowing	Astronomical Obs.
Dorpat			29.60	751.8	28.2	— 2.1	92	ENE	9	4			10					Light snow	Physical Cabinet.
St. Petersburg			29.72	754.8	22.3	— 5.4	97	NE	4	2			10					Snowing	Central Physical Obs.
Kuopio			29.78	756.4	11.3	—11.5	93	W	7	3			0						Ch. Forsten.
Kieff			29.44	747.8	26.6	— 3.0	98	ENE	4	2			10					Foggy	Physical Cabinet.
Nikolaiev			29.41	747.1	40.8	4.9	96	S	13	6			10						Kurdakof.
Kertch			29.68	753.9	48.4	9.1	83	SSE	4	2			1						Lagorio.
Moscow			30.00	761.9	8.4	—13.1	76	SSE	9	4			6						Meteorological Obs.
Lugan			29.76	756.0	22.3	— 5.4	83	ESE	13	6			10			blank	blank		Meteorological Obs.
Archangel			29.84	757.8	16.2	— 8.8	88	WSW	9	4			2						Ogorodnikof.
Tiflis	28.63	724.7	29.94	760.5	55.2	12.9	60	SW	4	2			4						Physical Observatory.
Astrakhan			30.11	764.9	22.6	— 5.2	85	E	2	1			10						Sebastianof.
Kasan			30.28	769.2	3.2	—16.0	66	S	4	2			3						Physical Cabinet.
Orenburg																			Tschernischef.
Ekaterinburg	29.20	741.7	30.23	767.7	15.4	— 9.2	44	SW	9	4			10						Meteorological Obs.
Nukuss			30.05	763.3	31.8	— 0.1	94	ENE	7	3			10						
Kasaly																			Bobrof.
Tashkend	28.45	722.7	30.21	767.4	43.5	6.4	74	E	4	2			8						Michelson.
Barnaul			30.50	774.6	— 2.7	—19.3	70	Calm	0	0			1						Meteorological Obs.
Yeniseisk			30.93	782.8	7.3	—13.7	87	SSW	2	1			0						Marks.
Irkutsk																			Usolzef.
Peking, (China)			30.56	776.3	24.8	— 4.0	71	NNW	20	9			5						Physical Observatory.
Nertchinsk																			Meteorological Obs.
Vladivostock																			
Nikolaievsk, on the Amoor																			

NOTE.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols; they omit the rain-fall. The elevation of Tiflis is 409 meters, or 1,341.8 feet; Ekaterinburg, 300.4? m., or 1,005.2? ft.; Tashkend, 494.2? m., or 1,621.3? ft.; Irkutsk, 392 m., or 1,286 ft.; Nertchinsk, 552.0? m., or 1,942.2? ft.

SPANISH SERIES.

Furnished by the cooperation of Antonio Aguilar, Director of the Royal Observatory at Madrid, and of Don Cecilio Pujazon, Captain R. N. Director of the Naval Observatory at San Fernando.

Madrid			29.84	758.0	47.8	8.8	44	NW	13.4	6.00		0	9			Inap.	Inap.	Almost cov'd	Royal Observatory.
San Fernando			30.06	763.4	58.8	14.9	32	NW	9.2	4.1		1	2	NW	NW	0	0		Naval Observatory.

NOTE.—The originals give the weather in general terms, as published; rain-fall for San Fernando from preceding to following midnight; wind-velocity for Madrid in kilometers per hour.

SWEDISH SERIES.

Furnished by the coöperation of Professor R. Rubenson, Director of the Royal Swedish Meteorological Institute, at Stockholm, and of Dr. H. H. Hildebrandsson, Chief of the Meteorological Division of the Upsala Observatory.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Haparanda			29.82	757.4	— 0.4	—18.0	89	N			2		10			0	0		
Umea																			
Hernosand			29.66	753.4	19.4	— 7.0	100	Calm			0		10					Snowing	
Stockholm			29.61	752.1	23.5	— 4.7	93	NE			4		10					Snowing	
Wisby			29.59	751.6	34.2	1.2	89	SSE			4		10			0.110	2.8		
Sub-Series.																			
Upsala			29.66	753.4	21.2	— 6.0	74	N	3.4	1.5			9			0.124	3.16		Dr. Hildebrandsson.

Note.—The originals give the wind-force by the scale 0 to 6, and Upsala also velocity in meters per second; occasionally, the weather by the Vienna symbols, or in general terms; no distinction between the amount of upper and lower clouds. The rain-fall is measured at 8 a. m., local time.

SWISS SERIES.

Furnished by the coöperation of Professor R. Wolf, Director of the Observatory at Zurich, and of Professor E. Plantamour, Director of the Observatory at Geneva.

Geneva	28.30	718.7	29.78	756.5	34.5	1.4	80	NNE			3		3			0	0	Clouds	The Observatory.
Zurich	28.13	714.4	29.84	757.9	33.1	0.6	74	E			1		3			0.059	1.5	Fair	The Observatory.

Note.—For Geneva the corresponding departures from the normal values are: Barometer, —7.1 mm; Thermometer, —3.4 cent.; Relative Humidity, —12 per cent.

Note.—The rain-fall is measured at Zurich at 7 a. m. on the following day. The originals give the barometer corrected but not reduced to sea-level; the wind-force by the scale 0 to 4 for Zurich; the amount of cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The elevation of Geneva is 408 meters, or 1,339 feet, and that of Zurich 470 meters, or 1,542 feet.

TURKISH SERIES.

Furnished by the cooperation of A. Coumbary, Effendi, Director of the Central Observatory at Constantinople, and of Professor C. V. A. Van Dyck, Superintendent of the Lee Observatory at Beirut.

Constantinople																			
Fao, (Persian Gulf)																			
Salonica																			
Valona																			
Varna																			
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y			30.11	764.8	68.9	20.5	58	SW			2		0			0	0	Blue sky	Prof. C. V. A. Van Dyck

Note.—The originals give the wind-force by the scale 0 to 7, (except Beirut, by the scale 0 to 12, and Constantinople velocity in meters per second;) the weather in general terms as published; no distinction between upper and lower clouds, and, except Constantinople and Beirut, the amount by the scale 0 to 4. It is assumed that the barometer is reduced to sea-level.

CANADIAN SERIES.

Furnished by the cooperation of Professor G. T. Kingston, Director of the Magnetic Observatory at Toronto, and Superintendent of the Meteorological Office of the Dominion of Canada, and the respective Observers. Those marked with a star (*) are also telegraphed daily to the office of the Chief Signal Officer, U. S. Army.

Bathurst, N. B			30.14	765.5	17.6	— 8.0	92	Calm	0	0			10						Hon. J. Ferguson.
Brockville, Ontario			29.94	760.5	29	— 1.7		Calm	0	0			Haze		SW	0	0	Hazy	W. R. Bigg.
*Chatham, N. B			30.09	764.3	14	—10.0	95	Calm	0	0		0	Haze			0	0	Clear	G. A. Blair.
Charlottetown, P. E. Island			30.01	762.2	19	— 7.2	95	N	10	4.5		5k	0			0	0	Fair	H. J. Cundall, C. E.
Cornwall, Ontario			29.93	760.2	39.4	4.1	86	SW			1		10s			0	0	Dull	James Smith, M. A.
Dalhousie, N. B			30.14	765.5	18.2	— 7.7	100	W			1					0	0	Clear	H. A. Johnson.
Esquimault, B. C			29.64	752.8	43.3	6.3	92	SW					10s			0	0	Cloudy	W. H. Bevis.
*Father Point, Quebec			30.13	765.3	26	— 3.3	98	E	2	0.9			10n			0	0	Cloudy	J. McWilliams.
Fredericton, N. B			30.14	765.5	7.9	—13.4	100	Calm	0	0			Fog			0	0	Clearing	Prof. Harrison.
*Fort Garry, Manitoba			30.36	771.1	— 2	—18.9	94	NE	5	2.2		0	0			0	0	Clear	James Stewart.
Goderich, Ontario			29.80	756.9	35.8	2.1	73	E			2	10k	0			0	0	Cloudy	H. J. Strang, M. A.
Granton, Ontario	28.64	727.4	29.76	755.9	35.0	1.7		E			1		10n			0	0	Cloudy	James Grant.
*Halifax, N. S			29.91	759.7	25	— 3.9	89	NW	10	4.5		5cs	0			0	0	Fair	F. Allison, M. A.
Hamilton, Ontario			29.82	757.4	34.7	1.5	78	SW			0	10cs	0			0	0	Cloudy	G. Dickson.
Heart's Content, N. F			29.97	761.2	41	5.0	82	E			2		10			0.15	3.8	Overcast	E. Weedon.
*Kingston, Ontario			29.94	760.5	33	0.6	74	NE	1	0.4		10cs	0			0	0	Cloudy	S. Woods, M. A.
*Montreal, Quebec			29.99	761 7	27	— 2.8	88	N	12	5.4			10n			0	0	Cloudy	C. H. McLeod, C. E.
*Ottawa, Ontario			30.01	762.2	27	— 2.8	76	N	8	3.6			10ks		NW	0	0	Cloudy	J. B. Haney.
*Parry Sound, Ontario			29.92	760.0	26	— 3.3	60	E	19	8.5			10n		E	0	0	Cloudy	Rev. R. Mosley.
Port Dover, Ontario			29.77	756.1	33	0.6	80	NE	11	4.9		Haze	Haze			0	0	Cloudy	H. Morgan.
Port Hastings, N. S			29.91	759.7	25.9	— 3.4		NW								0	0	Fine	Peter Grant.
Port Stanley, Ontario			29.75	755.6	37	2.8	57	NE	14	6.3			10ks		S	0	0	Cloudy	M. Payne.
*Quebec, Quebec			30.08	764.0	30	— 1.1	89	NE	18	8.0		0	0			0	0	Clear	Capt. Ashe, R. N.
*Rockliffe, Ontario			30.06	763.5	22	— 5.6	79	W	6	2.7		8cs	0	W		0	0	Fair	
St. John, N. B			30.09	764.3	21	— 6.1	71	Calm	0	0		0	0			0	0	Clear	G. Murdoch, C. E.
*Saugeen, Ontario			29.84	757.9	29	— 1.7	84	E	4	1.8		10k	8s			0	0	Cloudy	K. Stewart.
Stayner, Ontario			29.87	758.7	30	— 1.1	96	Calm	0	0			Haze			0	0	Hazy	R. J. Cole.
Stratford, Ontario	28.45	722.6	29.76	755.9	34.0	1.1	64	SE	5	2.2			10s			0	0	Cloudy	C. J. MacGregor, M. A.
*Sydney, C. B			29.89	759.2	33	0.6	98	N	5	2.2			Fog			0	0	Threatening	T. C. Hill.
*Toronto, Ontario			29.81	757.2	39	3.9	64	NE	14	6.3		2ck	8s			0	0	Cloudy	Magnetic Observatory.
Woodstock, Ontario			29.78	756.4	35.6	2.0	87	E	9	4.0			10s			0	0	Cloudy	J. Montgomery.
Sub-Series.																			
St. Johns, Newfoundland			30.09	764.3	31.5	— 0.3		E					10n			0.50	12 7	Raining	John Delany

Note.—The originals for Brockville, Charlottetown, Port Dover, Port Stanley, Stayner, St. Johns, N. F. and those telegraphed, give the amount of cloudiness by the scale 0 to 4. The elevation of Granton is 1,015 feet, or 309.4 m.; Stratford, 1,182 feet, or 360.3 m.

UNITED STATES SERIES.

Furnished by the coöperation of Bvt. Brig. Gen. Albert J. Myer, Chief Signal Officer, U. S. Army.

STATIONS.	Barometer. Corrected for instru-m'tal error and temperature. Inches.	Millimeters.	Reduced to sea-level. Inches.	Millimeters.	Temperature of the Air. Fahrenheit.	Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Velocity. Miles per hour.	Meters per second.	Force. 0—10.	Clouds. Amount. Up'er. 0—10.	Low'r. 0—10.	Direction. Upper. From—	Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Millimeters.	Weather	Observer.
Albany, N. Y.			29.95	760.7	25	— 3.9	88	Calm	0	0			10s			0	0	Cloudy	
Alpena, Mich.			29.98	761.5	24	— 4.4	74	NE	12	5.4			10s		NE	0	0	Cloudy	
Atlantic City, N. J.			29.88	758.9	39	3.9	91	SE	12	5.4		10cs	Haze	S		0	0	Cloudy	
Augusta, Ga.			29.67	753.6	49	9.4	93	NE	4	1.8			10s		NE	0.78	19.8	Cloudy	
Baltimore, Md.			29.83	757.7	40	4.4	73	NE	4	1.8		5c	5s			0	0	Cloudy	
Barnegat, N. J.			29.89	759.2	39	3.9	86	E	12	5.4		10cs	Haze			0	0	Fair	
Bismarck, Dakota	28.30	718.8	30.08	764.0	12	—11.1	61	N	3	1.3		0	0			0	0	Clear	
Boston, Mass.			30.02	762.5	28	— 2.2	100	NE	6	2.7			Fog			0	0	Dense fog	
Breckenridge, Minn.			30.20	767.1	7	—13.9	77	N	6	2.7		0	0			Inap.	Inap.	Clear	
Buffalo, N. Y.			29.75	755.6	40.0	4.4	47	E	7	3.1		5c	2s	SE		0	0	Fair	
Burlington, Vt.			29.98	761.5	37	2.8	70	S	2	0.9			8s			0	0	Cloudy	
Cairo, Ill.			29.64	752.8	41	5.0	91	Calm	0	0			10s			0.03	0.8	Cloudy	
Cape Hatteras, N. C.			29.75	755.6	55	12.8	80	SE	4	1.8			10ks am		S	0	0	Cloudy	
Cape Henry, Va.			29.81	757.2	42	5.6	74	S	4	1.8		5k	5s, hz.			0	0	Cloudy	
Cape Lookout, N. C.			29.74	755.4	54	12.2	80	SE	17	7.6			10s			0	0	Threatening	
Cape May, N. J.			29.84	757.9	42	5.6	83	SE	14	6.3		8c	0	SW		0	0	Fair	
Charleston, S. C.			29.68	753.9	56	13.3	93	S	7	3.1			10s		S	0.24	6.1	Cloudy	
Cheyenne, Wyoming	23.89	606.8	29.83	757.7	25	— 3.9	77	SW	4	1.8		0	1s			0	0	Clear	
Chicago, Ill.			29.72	754.9	34	1.1	89	N	16	7.2			10s			0.06	1.5	Cloudy	
Cincinnati, Ohio			29.59	751.6	47	8.3	55	SE	2	0.9			10n			Inap.	Inap.	Light rain	
Cleveland, Ohio			29.68	753.9	37	2.8	62	E	4	1.8			10s			0	0	Cloudy	
Corsicana, Tex.			29.94	760.5	40	4.4	64	W	7	3.1		2cs	0			0	0	Clear	
Davenport, Iowa			29.80	756.9	31	— 0.6	100	NE	12	5.4			10n			0.03	0.8	Light snow	
Denison, Tex.			29.92	760.0	39	3.9	63	NW	8	3.6		0	0			0	0	Clear	
Denver, Col.	24.69	627.1	29.91	759.7	30	— 1.1	68	E	1	0.4		0	5s			0	0	Fair	
Detroit, Mich.			29.67	753.6	35	1.7	70	N	7	3.1		1c	8s			0	0	Cloudy	
Dodge City, Kan.	27.37	695.2	29.73	755.1	32	0.0	89	N	16	7.2			10s		N	0	0	Cloudy	
Dubuque, Iowa			29.87	758.7	28	— 2.2	88	N	11	4.9			10n			0.11	2.8	Light snow	
Duluth, Minn.			30.14	765.5	25	— 3.9	87	NE	14	6.3			10s		NE	0.01	0.3	Cloudy	
Eastport, Me.			30.03	762.7	27	— 2.8	88	NW	5	2.2		0	0			0	0	Clear	
Erie, Pa.			29.66	753.4	40	4.4	48	NE	8	3.6		7ck	Haz			0	0	Hazy	
Escanaba, Mich.			30.02	762.5	16	— 8.9	83	N	23	10.3			10n			0.06	1.5	Light snow	
Fort Gibson, Indian Ter.			29.80	756.9	40	4.4	82	NW	17	7.6			10s		NW	0.11	2.8	Threatening	
Ft. St. Michael, Alaska																			
Fort Sill, Indian Ter.	28.80	731.5	29.93	760.2	42	5.6	42	NW	20	8.9		2ck	0	W		0	0	Fair	
Fort Sully, Dakota	28.38	720.8	30.16	766.1	20	— 6.7	85	NW	4	1.8			10s			Inap.	Inap.	Cloudy	
Florence, Arizona	28.24	717.3	29.74	755.4	55	12.8		NE				0	0			0	0	Clear	
Galveston, Tex.			29.94	760.5	51	10.6	59	NW	5	2.2		1cs	0			0.04	1.0	Clear	
Grand Haven, Mich.			29.72	754.9	36	2.2	80	NE	15	6.7			10s			0	0	Cloudy	
Indianapolis, Ind.			29.63	752.6	42	5.6	58	NE	3	1.3			10s, sm'			0	0	Cloudy	
Indianola, Tex.			29.87	758.7	51	10.6	78	NW	1	0.4			10s			0	0	Cloudy	
Jacksonville, Fla.			29.74	755.4	59	15.0	81	SW	8	3.6		8k	0	SW		Inap.	Inap.	Cloudy	
Keokuk, Iowa			29.68	753.6	37	2.8	90	N	10	4.5			10n		N	0.02	0.5	Light rain	
Key West, Fla.			29.89	759.2	67	19.4	100	SE	2	0.9			10ks			0.15	3.8	Cloudy	
Kittyhawk, N. C.			29.81	757.2	44	6.7	75	SE	11	4.9			10ks		SW	0	0	Cloudy	
Knoxville, Tenn.			29.68	753.9	36	2.2	90	SW	8	3.6			10n		W	0.40	10.2	Light rain	
La Crosse, Wis.			29.98	761.5	22	— 5.6	72	N	11	4.9			10s		N	0.05	1.3	Cloudy	
Leavenworth, Kan.			29.82	757.4	34	1.1	90	N	17	7.6			10n			0.20	5.1	Light snow	
Louisville, Ky.			29.64	752.8	43	6.1	83	SW	1	0.4			10n			0.05	1.3	Light rain	
Lynchburg, Va.			29.72	754.9	43	6.1	55	Calm	0	0			10s			0	0	Cloudy	
Malone, N. Y.			29.91	759.7	37	2.8	62	Calm	0	0			10s			0	0	Cloudy	
Marquette, Mich.			30.10	764.5	18	— 7.8	68	N	8	3.6			10s			0.02	0.5	Cloudy	
Memphis, Tenn.			29.67	753.6	43	5.6	83	W	4	1.8			10n		SW	0.21	5.3	Light rain	
Milwaukee, Wis.			29.82	757.4	30	— 1.1	89	NE	24	10.7			10n			0.08	2.0	Light snow	
Mobile, Ala.			29.82	757.4	44	6.7	92	Calm	0	0		Haze	5s		SW	0.26	6.6	Fair	
Montgomery, Ala.			29.79	756.7	46	7.8	84	SW	5	2.2			10s		SW	0.62	15.7	Cloudy	
Morgantown, W. Va.	28.60	726.4	29.66	753.4	39	3.9	63	N	1	0.4		10c	Sm'k	SW		0	0	Cloudy	
Mt. Washington, N. H.	23.72	602.5	30.08	764.0	30	— 1.1	78	NW	6	2.7		5c	0			0	0	Fair	
Nashville, Tenn.			29.65	753.1	42	5.6	83	SE	4	1.8			10s			0.11	2.8	Cloudy	
New Haven, Conn.			29.97	761.2	38	3.3	71	SW	10	4.5			10s		SW	0	0	Cloudy	
New London, Conn.			29.97	761.2	32	0.0	79	N	7	3.1		0	10s		N	0	0	Cloudy	
New Orleans, La.			29.83	757.7	49	9.4	85	W	4	1.8		4c	Fog	W		0.28	7.1	Fair	
Newport, R. I.			29.98	761.5	31	— 0.6	89	N	4	1.8			Fog			0	0	Foggy	
New York, N. Y.			29.94	760.5	38	3.3	63	NE	11	4.9		8cs	Fog	W		0	0	Cloudy	
Norfolk, Va.			29.80	756.0	46	7.8	69	SE	4	1.8		10s	Haz			0	0	Threatening	
North Platte, Neb.	27.00	687.3	29.73	755.1	27	— 2.8	88	NW	12	5.4			10s			0	0	Cloudy	
Omaha, Neb.	28.79	731.3	29.91	759.7	30	— 1.1	68	N	16	7.2			10s		N	0.15	3.8	Cloudy	
Oswego, N. Y.			29.88	758.9	39.6	4.2	52	SE	8	3.6			10s			0	0	Cloudy	
Pembina, Dakota			30.32	770.1	— 7.5	—21.9	79	Calm	0	0		0	0			0	0	Clear	
Philadelphia, Pa.			29.90	759.4	35	1.7	70	SE	3	1.3		2k	5s			0	0	Fair	
Pike's Peak, Col.	17.56	446.0	29.77	756.1	7	—13.9	100	NW	10	4.5			Fog			0	0	Fair	
Pittsburgh, Pa.			29.62	752.3	40	4.4	64	E	3	1.3			Fog			0	0	Foggy	
Port Huron, Mich.			29.71	754.6	33	0.6	89	N	8	3.6			10s, sm		NW	0	0	Smoky	
Portland, Me.			30.02	762.5	30	— 1.1	100	NE	3	1.3			Fog			0	0	Dense fog	
Portland, Oregon			29.85	758.2	47	8.3	69	S	12	5.4			10s			0.64	16.3	Cloudy	
Punta Rassa, Fla.			29.82	757.4	66.5	19.2	90	S	24	10.7			10ks		S	0.17	4.3	Threatening	
Rochester, N. Y.			29.80	756.9	37	2.8	53	SE	8	3.6		2c	5k		S	0	0	Fair	
Salt Lake City, Utah	25.48	647.2	29.80	756.9	38	3.3	80	SE	8	3.6		10k	0			0	0	Cloudy	
Sandy Hook, N. J.			29.93	760.2	35	1.7	90	NE	10	4.5		10cs	0	SW		0	0	Cloudy	
San Diego, Cal.			29.84	757.9	57	13.9	100	Calm	0	0			Fog			0	0	Foggy	
San Francisco, Cal.			29.94	760.5	53	11.7	79	W	6	2.7		0	2s			0.05	1.3	Clear	
Santa Fé, N. M.	23.14	587.8	29.68	753.9	27	— 2.8	48	E	1	0.4		0	5s			0	0	Fair	
Savannah, Ga.			29.69	754.1	55	12.8	87	W	12	5.4			10s		SW	0.25	6.3	Clearing	
Shreveport, La.			29.88	758.9	43	6.1	75	W	6	2.7		0	0			0	0	Clear	
Smithville, N. C.			29.73	755.1	50	10.0	100	E	10	4.5			10n			0.28	7.1	Light rain	
Springfield, Mass.			30.00	762.0	33	0.6	69	N	4	1.8			10s			0	0	Cloudy	
St. Louis, Mo.			29.64	752.8	41	5.0	91	SE	4	1.8			10n			0.09	2.3	Light rain	
St. Marks, Fla.			29.82	757.4	47	8.3	92	W	4	1.8		0	5s			0.82	20.8	Fair	
St. Paul, Minn.			29.99	761.7	23	— 5.0	85	N	9	4.0			10s		N	Inap.	Inap.	Cloudy	
St. Paul's Island, Alaska																			
Thatcher's Island, Mass.			30.02	762.5	34	1.1	100	NE	12	5.4						0	0	Dense fog	
Toledo, Ohio			29.67	753.6	37	2.8	70	NE	5	2.2		8ck	Fog			0	0	Cloudy	
Tucson, Arizona	27.37	695.2	29.92	760.0	40	4.4		S				5c	0	S		0	0	Fair	
Tybee Island, Ga.			29.65	753.1	53	11.7	93	SW	10	4.5			10ks		SW	0.35	8.9	Cloudy	
Vicksburg, Miss.			29.83	757.7	42	5.6	83	SW	8	3.6		0	0			0.36	9.1	Clear	
Virginia City, M. T.	24.02	610.1	29.50	749.3	31	— 0.6	79	Calm	0	0		1k	0	W		0	0	Clear	
Washington, D. C.			29.82	757.4	37	2.8	71	NE	7	3.1			10s, sm'		S	0	0	Threatening	
Wilmington, N. C.			29.72	754.9	51	10.6	93	Calm	0	0			10n			0.10	2.5	Light rain	

UNITED STATES SERIES.—CONTINUED.

STATIONS.	BAROMETER. Corrected for instrum'tal error and temperature. Inches.	BAROMETER. Corrected for instrum'tal error and temperature. Millimeters.	BAROMETER. Reduced to sea-level. Inches.	BAROMETER. Reduced to sea-level. Millimeters.	TEMPERATURE OF THE AIR. Fahrenheit.	TEMPERATURE OF THE AIR. Centigrade.	RELATIVE HUMIDITY. Per cent.	WIND. Direction. From—	WIND. Velocity. Miles per hour.	WIND. Velocity. Meters per second.	WIND. Force. 0—10.	CLOUDS. Amount. Upper. 0—10.	CLOUDS. Amount. Low'r. 0—10.	CLOUDS. Direction. Upper. From—	CLOUDS. Direction. Lower. From—	RAIN-FALL OR MELTED SNOW IN THE PAST 24 HOURS. Inches.	RAIN-FALL OR MELTED SNOW IN THE PAST 24 HOURS. Millimeters.	WEATHER.	OBSERVER.
Wood's Holl, Mass.	.....	.....	29.99	761.7	36	2.2	80	NE	4	1.8	.....	8c	0	NW	.....	0	0	Cloudy.	
Yankton, Dakota	28.75	730 2	30.13	765.3	20	— 6.7	70	NW	12	5.4	.....	0	0	.....	.....	0.03	0.8	Clear	
Yuma, Arizona	.....	.....	29.74	755.4	64	17.8	.....	E	.....	.....	.....	2cs	0	NE	.....	0	0	Fair	
SUB-SERIES.																			
Kingston, Jamaica, W. I.	.....	.....	30.15	765.8	74	23.3	76	Calm	0	0	.....	8c	2s	.....	.....	0	0	.....	James Gall.
Navassa, W. I.	.....	.....	.....	.....	77	25.0	.....	ENE	.....	.....	1	.....	.....	.....	.....	0	0	.....	Dr. G. H. Davison.
Clifton, Ja., W. I.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	C. Partridge.
Paramaribo, D. Guiana, S. A	.....	.....	30.02	762.5	79	26.1	87	E	.....	.....	3	5k	6ks	E	.....	0	0	¾ cloudy	C. J. Hering.
Batavia, Dutch Guiana, S. A.	30.07	763.7	.....	.....	79.7	26.5	.....	NE	.....	.....	.....	.....	.....	.....	.....	0	0	Fair	Dr. H. Groot.
Medellin, Colombia, S. A.	25.23	640.8	.....	.....	65.5	18.6	79	Calm	.....	.....	0	0	9ks	.....	.....	0	0	Cloudy	Thomas Herran.
York Factory, B. A.	.....	.....	30.44	773.2	—14 0	—25.6	73	S	2	0.9	.....	1c	0	S	.....	0	0	Fair	J. Fortescue, W. Wood
Honolulu, Oahu, H. I.	.....	.....	30.03	762.7	70	21.1	95	E	.....	.....	1	.....	.....	.....	.....	0	0	Clear	Daniel Smith.
Makawao, Maui, H. I.	.....	.....	29.98	761.5	64	17.8	78	Calm	.....	.....	0	0	5k	.....	.....	0.16	3.8	.....	F. L. Clarke

NOTE.—The originals give the amount of cloudiness by the scale 0 to 4, except York Factory, Makawao, Medellin and Paramaribo. The elevation of the barometer at Bismarck is 1,677 feet, or 511.1 meters; Cheyenne, 6,057.3 ft., or 1,846.2 m.; Clifton, about 2,592 ft., or 881.5 m.; Denver, 5,196 ft., or 1,565.2 m.; Dodge City, 2486ft., or 757.5 m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Florence, 1,550 (?) ft.. or 472.5 (?) m.; Makawao, 2,205 ft., or 672.1 m.; Morgantown, 1,027.9 ft., or 313.3 m.; Medellin, 4,876 ft., or 1,486.2 m.; Mt. Washington, 6,285 ft., or 1,915.6 m.; North Platte, 2,846 ft.. or 867.4 m.; Omaha, 1,054.6 ft., or 321.4 m.; Pike's Peak, 14,150.7 ft., or 4,313.1 m.; Salt Lake City, 4,362.2 ft., or 1,329.6 m.; Santa Fé, 6,862.2 (?) ft., or 2,091.6 (?) m.; Tucson, 2,545 (?) ft., or 775.7 (?) m.; Virginia City, 5,480 (?) ft., or 1,670.3 (?) m.; Yankton, 1,278 ft., or 389.5 m. The following constants are added in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Denver, 5.22 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fé, 6.54 in.; Tucson, 2.59 in.; Virginia City, 5.48 in. The elevation of Batavia is about 6 feet; the barometric readings need the addition of 0.2 mm. or 0.01 in. for reduction to sea-level.

UNITED STATES NAVAL SERIES.

By authority of the **SECRETARY OF THE NAVY.**

Furnished by the coöperation of the Navy Department, through Commodore Daniel Ammen, U. S. N., Chief of Bureau of Navigation.

STATIONS AND VESSELS.	True course toward—	Hourly rate in knots.	*Barometer as reported.		Temperature of the Air.		Relative Humidity.	Wind.				Clouds.				Rain-fall or melted snow in the past 24 hours.		State of Ocean.	Direction of swell from—	Weather.	Observer.
								Direction.	Velocity		Force.	Amount.		Direction.							
												Up'er	Low'r	Up'er	Low'r						
			Inches.	Millimeters.	Fahrenheit.	Centigrade.	Per cent.	From—	Miles per hour.	Meters per second.	0—10.	0—10.		From—	From—	Inches.	Millimeters.				
Naval Academy, Annapolis, Md.			29.45	748.0	39	3.9	91	NE			2		10			0	0			Hazy	
Naval Hospital, Annapolis, Md.			29.87	757.7	37	2.8	90	NE			1		8		NE	0	0			Cloudy	
Navy Yard, Mare Island, Cal.			30.00	762.0	54	12.2		WNW			2		8			0.135	8.51			Fair	
Navy Yard, Norfolk, Va.			29.94†	760.5†	41	5.0	91	SE	2	0.9			10kn			0	0			Overcast	
Navy Yard, Pensacola, Fla.			29.90	759.4	47	8.3	92	W	2	0.9			2		NE	0.28	7.1			‡D. clouds	
Navy Yard, Portsmouth, N.H.			30.00	762.0	28	— 2.2		Var.	1	0.4			Fog			0	0			Dense fog	
¶ Canonicus, New Orleans, La.			29.80	756.9	49	9.4	100	WSW			3		2		E					Hazy	
Colorado, New York, N. Y.			29.97	761.2	36	2.2		NE	7	3.1			9			0	0			Hazy	
Essex, Vera Cruz, Mex.			29.95	760.7	70	21.1	100	NW			1		9		SE			Smooth		‡D. clouds	
¶ Gettysburg, Menton, France			29.70	754.4	58	14.4		NW			1		9		NW					‡D. clouds	
Hartford, Hampton Roads, Va.			29.04	737.6	45	7.5		SE			1		10			0	0			Hazy	
Huron, Charleston, S. C.			29.76	755.9	57	13.9	87	SW			1–3		9		N&E	0.188	4.77			Raining	
Lackawana, Mare Island, Cal.			30.21	767.3	58	14.4	82	NW			4		1		SE			Smooth		Squally	
Marion, Port Said, Egypt			30.10	764.5	69	20.6	90	NW			2		1		SE			Smooth		‡D. clouds	
Michigan, Erie, Pa.			29.20	741.7	39	3.9	73	NE			1		5		NE					Partly cl'dy.	
Monongahela, Baltimore, Md.			29.84	757.9	40	4.4		NE			2		ok,k,s							Hazy	
New Hampshire, Port Royal, S. C.			29.89	759.2	55	12.8		W			5		4							‡D. clouds	
Omaha, Panama			30.04	763.0	74	23.3	95	NW			1		1			0	0	Smooth		Hazy	
Ossipee, Pensacola, Fla.			29.83	757.7	56	13.3		W			1									Hazy	
Pensacola, Panama			30.04	763.0	77	25.0	91	NW			1		1			0	0			Pleasant	
Plymouth, New Orleans, La.			29.83	757.7	51	10.6	79	SW			2		5		S&W	§0.5	§12.7			Light fog	
Ranger, Hampton Roads, Va.			29.94	760.5	45.5	7.5		SSE			1–2		5		N&W			Smooth		Overcast	
Richmond, Montevideo, Uruguay			30.03	762.7	69.8	21.0	87	NE			4		10							‡D. clouds	
¶ Rio Bravo, Matamoras, Mex.			29.90	759.4	51	10.6		S			1		6		SW					‡D. clouds	
Santee, Annapolis, Md.			29.83	757.7	38	3.3	100	NE			2		10							Hazy	
St. Louis, League Island, Pa.			29.76	755.9	36	2.2		NNE	6	2.7			5		NW	0	0			Cloudy	
Vandalia, Constantinople, Turkey			29.76	755.9	52	11.1	100	SW			2		8		NE					‡D. clouds	
Wabash, Boston, Mass.			30.06	763.5	33	0.6		NNE	5	2.2						0	0			Foggy	
Wyoming, Washington, D. C.			30.04	763.0	36	2.2		N			1		0								

* It is not known that the barometer is corrected for temperature, instrumental error or elevation. † Aneroid Barometer. ‡ Detached clouds. ¶ Barometer corrected for instrumental error and reduced to sea-level. § Approximated.

UNITED STATES MARINE SERIES

REPORTED TO THE OFFICE OF THE CHIEF SIGNAL OFFICER OF THE ARMY.

NAMES OF VESSELS.	True course toward—	Hourly rate in knots.	Barometer reduced to sea-level.		Temperature of the Air.		Relative Humidity.	Wind.				Clouds.				State of Ocean.	Direction of swell from—	Weather.	OBSERVER
								Direction.	Velocity.		Force.	Amount.		Direction.					
												Up'er	L ow'r	Upper.	Lower.				
			Inches.	Millimeters.	Fahrenheit.	Centigrade.	Per cent.	From—	Miles per hour.	Meters per second.	0—10.	0—10.	0—10.	From—	From—				
PACIFIC MAIL S. S. CO. MARINE SERIES. Furnished by the coöperation of ————, President; Williams, Blanchard & Co., Agents.																			
S. S. City of Peking																			Lt. Z. L. Tanner, U.S.N
OCCIDENTAL AND ORIENTAL S. S. CO. MARINE SERIES. Furnished by the coöperation of George H. Bradbury, President; T. H. Goodman, Agent.																			
S. S. Belgic																			Capt. John Metcalf.
S. S. Gaelic																			Capt. W. H. Kidley.
S. S. Oceanic																			Capt. H. Parsell.
NORTH GERMAN LLOYD OF BREMEN MARINE SERIES. Furnished by the coöperation of A. Schumacher & Co., Agents.																			
S. S. Baltimore																			Capt. H. Andressen.
S. S. Berlin																			Capt. C. Pohle.
S. S. Braunschweig																			Capt. K. Undütsch.
S. S. Nürnberg																			Capt. A. Jaeger.
S. S. Ohio																			Capt. G. Meyer.
MARINE SERIES. (Miscellaneous.) Furnished by the coöperation of the Observer named.																			
Schooner Addie Fuller, N. 37°, 52', W. 74°, 39'	NNE	5	29.82	757.4	49	9.4	85	SSE	11	4.9	.....	8ck	Haze	.....	.....	Smooth	.....	Hazy	Capt. James Jorgensen

NOTE.—The schooner Addie Fuller gives the amount of cloudiness by the scale 0 to 4.

COLLATED AT THE OFFICE OF THE CHIEF SIGNAL OFFICER OF THE ARMY, WASHINGTON, D. C.

The records which appear in this Bulletin are copied from the regular exchanges of this office, made in each instance in compliance with an especial request and are published for the uses of the coöperating observers. The barometric readings in the first two columns are reduced to freezing and their respective standards: those in the second two also to mean sea-level. The "weather" is generally published as given.

When the distinction between the upper and lower strata of clouds is not reported, the *kinds* or *types*, viz: cirrus, cumulus, stratus, nimbus, scud, fracto, pallio, haze, fog and smoke, as indicated, respectively, by the letters c, k, s, n, d, f, p, hz., fg. and sm'e, are generally published with the amount in the lower-cloud column. The distinction between the upper and lower strata is carefully made in the United States Series and a portion of the Canadian Series, and the types are indicated by the above letters or their combinations in the proper column.

Albert J. Myer

Brig. Gen. (Bvt. Assg'd.) Chief Signal Officer, U. S. A.

BULLETIN

OF

INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON FEBRUARY 24, 1877.

7:35 A. M. WASHINGTON mean time.

6:7 A. M. MEXICO mean time.
7:7 A. M. SAN JOSE mean time.
0:6 P. M. LISBON mean time.
0:28 P. M. MADRID mean time.
0:43 P. M. GREENWICH mean time.
0:53 P. M. PARIS mean time.
1:1 P. M. BRUSSELS mean time.
1:4 P. M. UTRECHT mean time.
1:13 P. M. BERNE mean time.
1:26 P. M. CHRISTIANIA mean time.
1:33 P. M. COPENHAGEN mean time.
1:33 P. M. ROME mean time.
1:37 P. M. BERLIN mean time.
1:49 P. M. VIENNA mean time.
1:55 P. M. STOCKHOLM mean time.
2:16 P. M. ATHENS mean time.
2:39 P. M. CONSTANTINOPLE mean time.
2:44 P. M. ST. PETERSBURG mean time.
6:36 P. M. CALCUTTA mean time.
10:2 P. M. TOKEI mean time.

ALGERIAN SERIES.

Furnished by the coöperation of General d'Eudeville, Commandant Supérieur du Génie in Algeria.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Nemours			29.99	761.8	64.4	18.0		WNW			4		10			0.157	4.0	Hidden	Michel.
Algiers			29.89	759.1	68.1	14.5		SE			2		10			0	0	Hidden	Biscarrat.
La Calle			29.87	758.7	53.8	12.1		W			3		5			0.236	6.0	Fair	Fleury.
Tunis			29.91	759.6	52.5	11.4		WSW			6		4			0	0	Fair	Jacques.
Sfax																			
Saida			29.90	759.5	50.4	10.2		NW			2		2			0	0	Clear	Millot.
Tebessa			29.91	759.6	38.8	3.8		W			3		2			0	0	Clear	Bourgeois.
Geriville			29.86	758.4	45.1	7.3		WNW			5		5			0	0	Fair	Lemaillot.
Laghouat			29.85	758.3	50.2	10.1		N			2		2			0	0	Clear	Guyot.
Biskra			29.87	758.8	63.1	17.3		NW			4		8			0	0	Cloudy	Kuntz.

NOTE.—In the originals the distinction between the amount of upper and lower clouds is apparently not made. The weather is published as given. The rain-fall is measured at a. m., local time.

AUSTRIAN SERIES.

Furnished by the cooperation of Professor Dr. Julius Hann, Director of the Imperial and Royal Central Meteorological Institute at Vienna.

Agram			29.82	757.4	42.1	5.6	48	SW			2	3				0	0		Prof. Ivan Stoxir.
Cracow, I. R. Observatory			29.69	754.0	31.6	— 0.2	94	W			1	8				0.016	0.4		Dr. Wierzbiski.
Eperies			29.66	753.3	35.6	2.0	59	NW			2	10cks				0.021	0.53		Julius Mikolik.
Gratz	28.52	724 3	29.80	756.8	38.7	3.7	65	SSW			2	6				0	0		Andreas Rospini.
Hermannstadt	28.20	710.2	29.05	753.2	35.4	1.9	75	NW			4	5				0	0		Prof. Reissenberger.
Kremsmünster	28.40	721.4	29.79	756.6	33.4	0.8	85	W			3	10				0.197	5.0		Prof. C. Wagner.
Lemberg			29.59	751.5	32.7	0.4	87	NW			2	8				0.024	0.6		Dr. T. Stanecki.
Nyiregyhaza																			Habzsuda Daniel.
Pola			29.81	757.2	45.9	7.7	43	ESE			1	7cs				0	0		I.R. Hydrographic Office.
Szegedin			29.73	755.2	40.1	4.5	48	N			1	3				0	0		Karl Stancel.
Trieste			29.86	758.5	45.7	7.6	55	W			1	1				0	0		Prof. V. Faroli.
Vienna			29.78	756.3	32.4	0.2	100	W			1	10				0.102	2.6		I.R. Central Met. Obs'y.

NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 7 p. m., local time. The elevation of Gratz is 343.5 meters, or 1,126.9 feet; Hermannsindt, 407.8 meters, or 1,337.9 feet; Kremsmünster, 383.6 meters, or 1,258.5 feet.

BELGIAN SERIES.

Furnished by the cooperation of J. C. Houzeau, Director of the Royal Observatory at Brussels.

Arlon			29.79	756.7	33.1	0.6	97	SSE			4	10				0.38	9.7	Snowing	
Brussels			29.60	751.9	41.5	5.3	95	SW			4	10				0.217	5.50	Raining	Royal Observatory.
Furnes			29.60	751.8	44.8	7.1	92	WSW			4	10				0.016	0.4		
Maeseyck			29.60	751.9	36.9	2.7	95	SSW			6	10				0.213	5.4	Raining	

NOTE.—In the originals, the weather is occasionally given in general notes.

BRITISH SERIES

Furnished by the coöperation of Robert H. Scott, Esq., Director of the Meteorological Office, London, Alexander Buchan, Secretary of the Scottish Meteorological Society, Edinburgh, and the respective Observers.

STATIONS.	Barometer. Corrected for instrum't'l error and temperature. Inches.	Barometer. Corrected for instrum't'l error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Aberdeen			29.26	743.2	45.0	7.6		W	21	9.4			6			0.005	0.13	Showery	William Boswell.
Ardrossan			29.47	748.5	47	8.3		WNW			4		8					Raining	William McNeil.
Armagh, Observatory			29.66	753.4	50.0	10.0		WNW	21	9.4			7					*D. clouds	S. Call, for Dr. Robinson.
Bidston (Liverpool Obs.)			29.56	750.8	47.0	8.3		W	49	21.9			10					Overcast	John Hartnup.
Birr Castle, (Parsonstown)			29.89	759.9	50.1	10.1		WNW			1-3		10					Drizzling	J. Dreyer.
Bradford			29.50	749.3	49.1	9.5		W			6		10			0 01	0.3	Squally	J. McLandsborough.
Bridgetown, (Barbados)			30.01	762.2	84	28.9		NE			1		4					*D. clouds	Sergt. J. F. Halanen, A.
Cambridge, Observatory			29.58	751.3	51.0	10.6		W			2		1					*D. clouds	H. Todd. [H.C.
Cardington			29.64	752.8	50.0	10.0		W			4		9					Overcast	John McLaren.
Carlisle																			T. Bell, for J. Cartmell.
Chatham, School M. E			29.70	754.4	50.2	10.1		NE			2		8					Overcast	Maj. C. N. Martin, R.E.
Dartmoor	28.38	720.8	29.91	759.7	42.6	5.8		W			6		10					Rain & fog	R. E. Power.
Davos Platz, (Switzerland)	24.55	623.6			22.0	— 5.6	54	N			1		4			0.039	0.98	*D. clouds	Francis Redford, M. A.
Donaghadee			29.58	751.3	48	8.9		NW			6		1					Blue sky	J. Mac Gowan.
Dover			29.32	752.3	48	8.9		W			3		9					Overcast	J. Costello.
Eccles, (near Manchester)			29.56	750.8	47.9	8.8		NW	9.8	4.4			10					Gloomy	Thomas Mackereth.
Falmouth, Observatory			29.90	759.4	49.7	9.8		WNW			5		9					Overcast	The Staff.
Fort Napier, (Natal)	27.56	700.0	29.80	756.9	87.8	31.0		E			1		7					*D. clouds	Pvt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.88	758.9	88	31.1		NW			0		5					*D. clouds	
Galway, Queen's College			29.75	755.6	51	10.6		NW			4		6					*D. clouds	Prof. A. H. Curtis.
Gibraltar, (Mediterranean)			29.98	761.5	59.4	15.2		NE			1		0					Blue sky	Corpl. C. Aitken, A.H.C.
Glasgow, Observatory			29.42	747.3	48.8	9.3		W			1		8					Threatening	Lewis Stuart.
Great Yarmouth			29.51	749.5	48	8.9		WNW			3		7					Misty	G. T. Watson.
Greenwich, Royal Obs'y			29.66	753.4	48.6	9.2		N			3		10			Blank	Blank	Overcast	The Staff, for G. B. Airy.
Guernsey			29.85	758.2	49	9.4		WSW			4		10					Drizzling	Dr. S. E. Hoskins.
Helston			29.95	760.7	50	10.0		NW			6		6k			0	0	Gloomy	M. P. Moyle.
Holyhead			29.65	753.1	50	10.0		W			5		2					Blue sky	John Tilston.
Kew, Observatory			29.66	753.4	50.1	10.1		WNW	18	8.0			10					Threatening	The Staff.
Kingstown			29.70	754.4	50	10.0		WNW			6		10					Overcast	George Mitchell.
Leicester Museum			29.68	753.9	47.3	8.5		NW			2		10					Overcast	Wm. J. Harrison, F.G.S.
Malta, (Mediterranean)			30.00	762.0	55.2	12.9		NW			2		6k					*D. clouds	Corp'l. P. Bravis, A.H.C.
Nairn			29.29	744.0	46	7.8		WNW			3		10					Overcast	W. D. Penny.
Nassau, (Bahamas)			30.00	762.0	64.0	17.8		W			4		10			Blank	Blank	Squally	Surg. Maj. Henry.
Nottingham, Observatory			29.58	751.3	49.3	9.6		WSW			4		10d		WNW	0.083	2.11	Overcast	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			29.62	752.3	45.9	7.7		W			4		10					Raining	Rev. Stephen Whitty.
Oxford, Radcliffe Obs'y			29.67	753.6	50	10.0		W			3		10					Gloomy	J. Lucas.
Plymouth			29.85	758.2	48.6	9.2		NW			1		10					Drizzling	John Merrifield.
Roche's Point			29.93	760.2	51	10.6		NNW			5		8					Cloudy	W. Kennedy.
Saint Ann's Head			29.78	756.4	49	9.4		WNW			5		10					Raining	John C. Walker.
Saint Helier, (Jersey)			29.85	758.2	50.6	10.3		NW			4		10					Overcast	A. P. Amy.
Sandwick Manse, (Orkneys)			29.17	740.9	45.1	7.3		W	40	17.9			10					Showery	Rev. C. Clouston, LL. D.
Scarborough																			F. Shaw.
Scutari Cemetery, (Turkey)			29.71	754.6	53.8	12.1		WSW			2		1					*D. clouds	Sergt. W. H. Lyne.
Sheffield			29.50	749.3	49.5	9.7		WNW			4		8			0.017	0.43	Overcast	W. F. Cooper.
Silloth Rectory			29.48	748.8	51.4	10.8	85	NW			3		4			0.050	1.27	*D. clouds	Rev. Francis Redford
Stonyhurst, Observatory			29.57	751.1	45.2	7.9		W			4		10					Overcast	Rev. S. J. Perry.
Stornoway, Lewis C., (Hebr.)			29.33	745.0	42	5.6		WNW			5		8					Threatening	John Smith.
Stratfield Turgiss			29.72	754.9	50.4	10.2		NW			1		10					Overcast	Rev. Charles H. Griffith.
Thurso			29.16	740.7	46	7.8		W			6		7					*D. clouds	John Trotter.
Truro, Royal Institution			29.90	759.4	50	10.0		W			7		10					Raining	W. Newcombe.
Valencia, Observatory			29.98	761.5	50.3	10.2		WNW	29	13.0			10					Drizzling	The Staff.
SUB-SERIES.																			
Calf of Man, (Isle of Man)																			Henry Mercer.
Cape Good Hope, Obs'y			29.84	757.9	77.9	25.5	53	NW	15	6.7		0	1						The Staff, for E. J. Stone.
Hobart Town, (Tasmania)			29.80	756.9	64.0	17.8	94	N			3		10kn			0.25	6.3	Light rain	Francis Abbott, F.R.A.S.
Leith, Restalrig Park			29.36	745.7	50.9	10.5		NW			4		4k			0.02	0.5	Fine	Andrew Gibb.
Mauritius, Observatory			30.03	762.7	80.9	27.2	60	E	16.0	7.2		0	2		ESE	0.16	4.1	Blue sky	C. Meldrum.
Melbourne, Observatory			30.19	766.8	56.6	13.7	67	ESE	8	3.6			2			0	0	Very fine	R. L. J. Ellery.
Monach L't-house, (Hebrides)																			J. Youngclause.
North Unst, (Shetland Is.)																			Robert Burnet.

NOTE.—Generally, the originals do not give the relative humidity, rain-fall, or distinction between upper and lower clouds. The originals give the wind direction to 32 points and weather by the Beaufort notation. The originals give the barometer for Aberdeen, Cardington, Freetown, Galway, Oxford, St. Helier, Sandwick, Scarborough, Stonyhurst, Leith, Monach and North Unst as read off and the amount of cloudiness for Stornoway by the scale 0 to 4. The wind-force is given by the scale 0 to 12 in the official series; 0 to 6 in the sub-series; except in lbs. per square foot for Greenwich and Hobart Town. The rain-fall is measured at Aberdeen at 10 a. m.; Bradford, 9 a. m.; Hobart Town, 7:30 a. m.; Nottingham, 6 p. m.; Mauritius, 9 a. m., local time. The elevation of Dartmoor is 1,400 feet, or 426.7 meters; Davos Platz, 5,1057 feet, or 1,556.0? meters; Fort Napier, 2,200 feet, or 670.6 meters. *Detached clouds.

By authority of the MINISTER OF FOREIGN AFFAIRS.

COSTA RICA SERIES.

Furnished by the coöperation of Senor Federico Maison, Director of the Central Office of Statistics and Meteorology.

San José																			

DANISH SERIES.

Furnished by the coöperation of Captain N. Hoffmeyer, Director of the Royal Danish Meteorological Institute at Copenhagen.

Copenhagen			29.30	744.1	33.4	0.8	83	SSW			4		10					Snowing	
Faröe			29.20	741.7	40.1	4.5	98	WSW			4		9						
Godthaab, (Greenland)			30.30	769.6	17.8	— 7.9	94	N			4		10						
Stykkisholm, (Iceland)			29.47	748.6	23.0	— 5.0	90	NE			6		10						
Thorshavn, (Faröe)			29.05	737.9	35.8	2.1	77	N			5		7					Snowing	
Vestervig			29.10	739.0	37.4	3.0	100	SW			6		10					Rain & fog	

NOTE.—The originals give the wind-force by the scale 0 to 6; occasionally, weather by Vienna symbols; no distinction between the amount of upper and lower clouds.

FRENCH SERIES.

Furnished by the co peration of His Excellency, U. J. Le Verrier, Director of the Paris Observatory, and the respective Observers.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Alençon	.....	.....	29.88	759.0	44.6	7	94	W	.....	.....	2	.....	10kn	.....	W	0	0	Covered	Normal School.
Amiens	.....	.....	29.75	755.6	42.1	5.6	92	W	.....	.....	2	.....	10	.....	.....	0	0	Covered	Normal School.
Avignon	.....	.....	29.91	759.6	46.0	7.8	36	N	.....	.....	6	.....	.....	.....	.....	0	0	Light clouds	Normal School.
Bar-sur-Seine	.....	.....	29.87	758.7	40.3	4.6	77	SW	.....	.....	2	.....	10	.....	WSW	Inap.	Inap.	Covered	C. Saillard.
Beaumette, (near Angers)	.....	.....	29.87	758.8	47.5	8.6	75	SW	12.1	5.4	.....	.....	.....	.....	W	0	0	.....	Beaumette Observ'tory.
Beauvais	.....	.....	29.78	756.3	45.7	7.6	81	W	.....	.....	2	.....	10	.....	W	0	0	Covered	Normal School.
Besançon	.....	.....	29.96	761.0	39.6	4.2	67	SW	.....	.....	3	.....	8	.....	SW	0	0	Very cloudy	Normal School.
Bourg en Bresse	.....	.....	30.02	762.6	39.2	4	73	W	.....	.....	2	.....	5n	.....	E	0	0	Cloudy.....	Normal School.
Bourges	.....	.....	29.96	760.9	42.1	5.6	85	SW	.....	.....	2	.....	10	.....	W	0.016	0.4	Covered	Normal School.
Brest	.....	.....	29.91	759.6	49.1	9.5	81	NNW	.....	.....	3	.....	10	.....	NNW	0.039	1.00	.....	Naval Observatory.
Carcassonne	.....	.....	30.02	762.6	40.3	4.6	71	W	.....	.....	1	.....	10	.....	E	0	0	Covered	Normal School.
Caen	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Chartres	.....	.....	29.72	755.0	44.2	6.8	88	WSW	.....	.....	3	.....	10	.....	NNE	0	0	Covered	Normal School.
Châlons-sur-Marne	.....	.....	29.80	757.0	39.2	4.0	83	W	.....	.....	6	.....	10n	.....	E	0.008	0.2	Covered	Normal School.
Clermont	.....	.....	29.97	761.1	40.3	4.6	65	E	.....	.....	1	.....	10	.....	.....	0	0	.....	Puy de Dome Obs'y.
Commercy	.....	.....	29.91	759.7	36.5	2.5	86	WSW	.....	.....	2	.....	10	.....	.....	0	0	Covered	Normal School.
Commune de Gréasque*	.....	.....	29.85	758.1	45.5	7.5	25	NW	.....	.....	2	.....	2	.....	NW	0	0	.....	M. Kina.
Grenoble	.....	.....	29.97	761.1	38.1	3.4	65	NE	.....	.....	2	.....	2ks	.....	SW	0	0	Slightly cl'dy	Normal School.
La Roche-sur-Yon	.....	.....	30.01	762.2	47.5	8.6	72	NW	.....	.....	4	.....	10	.....	.....	0	0	Covered	Normal School.
Le Mans	.....	.....	29.93	760.3	44.8	7.1	88	WSW	.....	.....	4	.....	8	.....	W	0	0	Very cloudy	Normal School.
Lons-Le-Saulnier	.....	.....	30.04	763.0	40.1	4.5	65	SW	.....	.....	1	.....	5	.....	.....	0.110	2 80	Light rain....	Naval Observatory.
Lorient	.....	.....	30.10	764.4	51.8	11.0	90	NW	.....	.....	1	.....	5	.....	N	0.008	0.2	Cloudy.....	Normal School.
Mâcon	.....	.....	30.05	763.2	38.1	3.4	66	N	.....	.....	1	.....	5	.....	N	0	0	Cloudy.....	M. Schuster.
Metz	.....	.....	29.87	758.6	34.9	1.6	92	SSW	.....	.....	4	.....	10n	.....	.....	0.012	0.3	.....	Normal School.
Mirecourt	.....	.....	29.85	758.3	36.0	2.2	82	NW	.....	.....	2	.....	10	.....	SE	0	0	Covered	Normal School.
Nismes	.....	.....	29.90	759.4	46.8	8.2	57	NE	.....	.....	4	..c	.....	N	.....	0	0	.....	Normal School.
Orleans	.....	.....	29.88	759.0	40.6	4.8	90	N	.....	.....	4	.....	10	.....	N	0	0	Covered	National Observatory.
Paris, Observatory	.....	.....	29.81	757.1	44.1	6.7	81	SW	.....	.....	2	.....	10kn	.....	WSW	0	0	Covered	Normal School.
Parthenay	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Privas	.....	.....	29.97	761.2	39.6	4.2	44	WNW	.....	.....	2	.....	5	.....	WNW	0	0	Cloudy.....	Naval Observatory.
Rochefort, Observatory	.....	.....	30.02	762.5	47 5	8.6	75	WSW	.....	.....	4	.....	10	.....	N	0.098	2.5	Covered	Normal School.
Rouen	.....	.....	29.78	756.4	47.3	8.5	82	W	.....	.....	2	.....	10	.....	W	0	0	Covered	Normal School.
Saint Lo	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Tarbes	28.87	733.4	29.98	761.6	40.6	4.8	93	W	.....	.....	4	.....	10	.....	.....	0	0	Covered	Normal School.
Villefranche	.....	.....	29.99	761.8	41.9	5.5	92	NNW	.....	.....	1	.....	8	.....	NW	0	0	Very cloudy	Normal School.
Sub-Series.																			
Fort de France, Martinique	.....	.....	29.91	759.8	77.4	25.2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	L'Abbé Marchési.
Marseilles	.....	.....	29.85	757.1	49.5	9.7	45	NW	.....	.....	2	.....	.....	.....	.....	0	0	Partly cl'dy.	Marseilles Observatory.
Mont-Louis	24.65	626.1	29.97	761.1	25.9	— 3.4	62	NNW	13.0	5.83	.....	.....	4	.....	N	0.039	1.0	.....	—. Falguère.
Montsouris, Paris	.....	.....	29.79	756.7	43.5	6.4	85	SW	.....	.....	3	.....	10	.....	WSW	0	0	.....	Montsouris Observatory
Perpignan	.....	.....	29.80	756.8	43.3	6.3	53	NW	24.2	10.83	.....	.....	5	.....	NW	0	0	.....	Dr. Fines.
Pic du Midi, (Summit,) H. P.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. Baylac.
Pic du Midi, (Plantade,) H. P.	22.24	564.9	.....	.....	19.4	— 7.0	.....	N	.....	.....	3	.....	4	.....	.....	0.602	15.3	Snowy.....	General de Nansouty.
Saint Maur, (near Paris)	.....	.....	29.80	756.9	43.0	6.1	83	SW	.....	.....	2	.....	10	.....	.....	.....	.....	Light rain ...	E. Renou.
Toulouse	.....	.....	30.08	764.1	40.6	4.8	62	NW	.....	.....	3	.....	7	.....	.....	Inap.	Inap.	.....	Toulouse Observatory.
Tours	.....	.....	29.91	759.8	45.3	7.4	67	SW	.....	.....	2	.....	10	.....	WNW	0	0	.....	C. Marquet.
Versailles, (near Paris)	.....	.....	29.80	756.9	44.6	7.0	85	W	.....	.....	2	.....	10	.....	.....	0	0	Covered	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai)	.....	.....	30.53	775.5	32.5	0.3	76	NNW	7.4	3.3	.....	.....	10	.....	.....	0.039	1.0	Snowing.....	Marc Dechevrens, S. J.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Note.—Generally, the originals give the wind-force by the scale 0 to 7; no distinction between upper and lower clouds, and, in the official series, the amount by the scale 0 to 4; the rain-fall as measured at 7, 8 or 9 a. m., local time; at Clermont, 9 a. m. of the following day; the weather in general terms as published. The elevation of Clermont is 386 meters, or 1,272.9 feet; Commune de Gréasque, 322 meters, or 1,056.4 feet; Tarbes, 308 meters, or 1,010 feet; Mont-Louis, 1,586.40 meters, or 5,204.8 feet; Pic du Midi, (Summit,) 2,877 meters, or 9,439.1 feet; Pic du Midi. Plantade,) 2,366 meters, or 7,762.6 feet. In correcting the Mont-Louis barometric observ tions for altitude, the constant 135. millimeters has been added. *Bouches-du-Rhône

GERMAN SERIES.

Furnished by the coöperation of Professor Dr. G. Neumayer, Director of the German Naval Observatory, Hamburg.

Bamberg	.....	.....	29.75	755.6	36.1	2.3	62	W	.....	.....	4	.....	7	W	.....	0	0	.....	Prof. T. Hoh.
Berlin	.....	.....	29.56	750.7	39.2	4.0	71	NW	.....	.....	3	.....	9	.....	.....	0	0	.....	Prof. Arndt.
Breslau	.....	.....	29.66	753.4	34.0	1.1	77	W	.....	.....	4	.....	5	.....	.....	0.035	0.9	.....	Royal University Obs'y.
Carlsruhe	.....	.....	29.75	755.7	37.4	3.0	76	SW	.....	.....	5	.....	10	.....	.....	.....	.....	Snowing.....	A. Senz.
Cassel	.....	.....	29.60	751.9	34.2	1.2	77	SW	.....	.....	6	.....	10	WSW	.....	0	0	.....	Dr. H. Möhl.
Crefeld	.....	.....	29.56	750.9	36.5	2.5	91	S	.....	.....	4	.....	10	.....	.....	0.16	4.	Rain & snow	Director Lose.
Emden	.....	.....	29.48	748.9	39.0	3.9	96	SW	.....	.....	3	.....	10	.....	.....	0	0	.....	Prof. Prestel.
Frankfort on the Main	.....	.....	29.80	756.9	37.4	3.0	75	WSW	.....	.....	3	.....	10	.....	.....	.....	.....	Snowing.....	Physical Society.
Friedrichshafen	28.42	721.9	29.90	759.5	36.0	2.2	64	SW	.....	.....	5	.....	6	.....	.....	0.024	0.6	Snowing.....	M. Wilhelm.
Hamburg	.....	.....	29.42	747.3	36.0	2.2	91	SW	.....	.....	6	.....	10	.....	.....	0.063	1.6	Squally.....	Captain F. Hegemann.
Kiel	.....	.....	29.32	744.7	35.8	2.1	93	SW	.....	.....	4	.....	10	.....	.....	0.122	3.1	.....	Prof. G. Karsten.
Königsberg, (Prussia)	.....	.....	29.47	748.4	32.9	0.5	78	NW	.....	.....	2	.....	5	.....	.....	0.020	0.5	Snowing.....	Prof. E. Luther.
Köslin	.....	.....	29.47	748.5	32.7	0.4	.....	SW	.....	.....	2	.....	10	.....	.....	Inap.	Inap.	Snowing.....	H. Müller.
Leipsic	.....	.....	29.66	753.4	38.3	3.5	65	SW	.....	.....	4	.....	8	SW	.....	0.020	0.5	.....	Prof. Bruhns.
Meinel	.....	.....	29.43	747.6	33.3	0.7	76	W	.....	.....	4	.....	10ks	W	.....	0	0	.....	Reinbrecht & Skalweit.
Münster	.....	.....	29.47	748.5	35.2	1.8	96	SW	.....	.....	2	.....	10	.....	.....	0	0	.....	Prof. E. Heis.
Neufahrwasser	.....	.....	29.47	748.6	34.9	1.6	75	SW	.....	.....	3	.....	10	.....	.....	0.020	0.5	Snowing.....	A Lothe.
Posen	.....	.....	29.53	750.1	38.3	3.5	63	W	.....	.....	5	.....	9	.....	.....	0.035	0.9	.....	Dr. Magener.
Strassburg, (in Alsace)	.....	.....	29.86	758.5	39.6	4.2	67	SW	.....	.....	2	.....	10	.....	.....	0.031	0.8	Snowing.....	Dr. Schur.
Stuttgart	.....	.....	29.80	757.0	37.0	2.8	60	W	.....	.....	4	.....	10	.....	.....	0.031	0.8	.....	Prof. Schoder.
Thorn	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Dr. Hasenbalg.
Treves, (Trier)	.....	.....	29.64	752.8	35.8	2.1	89	SW	.....	.....	8	.....	10	.....	.....	0.161	4.1	Foggy	Prof. Flesch.
Weissenburg, (Bavaria)	28.24	717.3	29.80	756.8	34.3	1.3	96	WSW	.....	.....	5	.....	10	.....	.....	0.008	0.2	.....	Dr. von Bebber.
Wustrow, Naval School	.....	.....	29.48	748.7	34.7	1.5	93	SW	.....	.....	6	.....	10	.....	.....	0.016	0.4	.....	E. F. Schütz.
German Naval Series.																			
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Note.—The elevation of Friedrichshafen is 412.4 meters, or 1,356.3 feet; Weissenburg, 431 meters, or 1,414.0 ft. In the originals the distinction between the amount of upper and lower clouds is not made. It is not always certain that the remarks in the weather column refer to the moment of observation.

GREEK SERIES.

Furnished by the cooperation of Professor Dr. J. F. Julius Schmidt, Director of the Royal Observatory at Athens.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Athens			29.83	757.7	58.6	14.8		S										Clear	

Note.—The originals give the barometer corrected, but not reduced to sea-level; occasionally the kind of clouds; the weather as published. They omit the humidity, wind-force, amount of cloudiness and rain-fall.

INDIAN SERIES.

Furnished by the coöperation of H. F. Blanford, Meteorological Reporter to the Government of India.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Kurrachee																			
Deesa																			
Bombay																			
Poona																			
Lahore																			
Belgaum																			
Bangalore																			
Rorkee																			
Agra																			
Trichinopoly																			
Nagpur																			
Madras																			
Lucknow																			
Allahabad																			
Patna																			
Hazaribagh																			
Cuttack																			
Calcutta (Alipore)																			
Goalpara																			
Chittagong																			
Sibsagar																			
Rangoon																			
Jubbulpore																			

ITALIAN SERIES.

Furnished by the cooperation of His Excellency the Minister of Agriculture, Industry and Commerce, and the respective Observers.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Udine			29.80	757.0	42.8	6.0	31	S	0.7	0.3			7			0	0		Prof. Giovanni Clodig.
Stelvio	21.72	551.6			7.3	—13.7		SE			1		6			0	0		Signora Ernesta Manfredi.
Valdobbia	21.78	553.1			14.5	—9.7	63	W			2		6	NE		0	0		Ab. Dom. Mongini.
Padua			29.82	757.3	43.0	6.1	55	NE	8.1	3.6			3	S		0	0		Prof. Dott. Lorenzoni.
Vicenza			29.83	757.6	42.6	5.9	55	NE	3.1	1.4			8	W		0.012	0.3	Light snow.	Conte Alm. Da Schio.
Verona			29.74	755.5	47.1	8.4	85	E			1		0			0	0		Dott. B. Bertoncelli.
Bergamo	28.45	722.6	29.79	756.6	42.8	6.0	42	SSW			2		4			0	0		Prof Trionfini Carlo.
Domodossola			29.79	756.6	44.6	7.0	18	SW			6		6			0	0		Prof. Giuseppe Calza.
Milan			29.84	757.9	45.9	7.7	47	E			2		1	NW		0	0		Ab. Gio. Capelli.
Pavia			29.82	757.4	44.1	6.7	45	NE			2		1			0	0		Prof. Gio. Cantoni.
Moncalieri			29.82	757.5	45.1	7.3	39	WSW	0.7	0.3			1			0	0		Prof. P. F. Denza.
Mondovi	27.87	707.8	29.81	757.1	39.7	4.3	43	N			4		1	NNE		0	0		Prof. D. C. Bruno.
Porto Maurizio			29.84	758.0	50.4	10.2	43	E			6		1			0	0		Prof. L. Vassallo.
Genoa			29.80	756.9	52.3	11.3	42	SW	6.3	2.8			0			0	0		Prof. G. M. Garibaldi.
Piacenza			29.84	757.8	43.7	6.5	56	N	3.8	1.7			2			0	0		Dott. G. Manzi.
Parma			29.80	757.0	47.1	8.4	56	ENE			2		2			0	0		Prof. P. Pigorini.
Florence			29.84	757.8	48.2	9.0	56	W			2		6			0	0		Cav. F. Meucci.
Leghorn			29.80	756.9	48.7	9.3	61	E	6.9	3.1			4	W		0	0		Prof. P. Monte.
Siena	28.57	725.7	29.80	757.0	44.4	6.9	57	N	0	0			9	W		0	0		Prof. L. Toscani.
Urbino	28.25	717.5	29.85	758.1	40.6	4.8	66	E			2		1			0	0		Prof. P. Serpieri.
Pesaro			29.82	757.5	46.6	8.1	58	E	16.1	7.2			2	S		0	0		Prof. Luigi Guidi.
Ancona			29.82	757.4	47.5	8.6	57	NW			4		1			0	0		Prof. F. De— Bosis.
Grosseto			29.80	757.0	52.3	11.3	59	SW			2		4	S		0	0		Avv. P. Ponticelli.
Rome			29.83	757.6	54.0	12.2	54	SSW	3.8	1.7			8	WSW		0	0		Prof's. P. Secchi & L. Respighi.
Naples, O. U.			29.86	758.5	54.3	12.4	57	N			2		5	NW		0.232	5.9		Prof. L. Palmieri.
Lecce			29.88	758.9	53.2	11.8	53	WNW	12.5	5.6			3	W		0	0		Prof. C. De—Giorgi.
Cosenza			29.96	761.0	52.3	11.3	66	SE	0	0			9			0.240	6.1	Raining.	Prof. F. D. Conti.
Cagliari			29.79	756.7	45.0	7.2	97	NW			1		10	W		0.098	2.5	Raining.	Prof. A. Pacinotti.
Riposto, (Sicily)			29.85	758.2	57.6	14.2	51	NE			2		6	SE		0	0		Prof. F. Caffiero.
Palermo			29.81	757.1	55.0	12.8	51	WSW	7.4	3.3			9	WSW		0.043	1.1	Raining.	Prof. G. Cacciatore.
Caltanissetta	27.93	709.4	29.92	759.9	43.3	6.3	85	WSW			2		10	SE		0.091	2.3	Raining.	Prof. A. Pagani.
Siracusa			29.85	758.3	56.8	13.8	54	WNW			2		10	WNW		0	0		Prof. V. Giuliano.
Sub-Series.																			
Naples, S. R.			29.89	759.1	49.8	9.9	67	NE	0.7	0.3			4	NE		0.350	8.9		Prof. F. Brioschi

Note.—The originals give the wind-force by the scale 0 to 4, or the velocity in kilometers per hour; generally, no distinction between upper and lower clouds; occasionally the weather by the Vienna symbols. The elevation of Stelvio is 2,543.0 meters, or 8,342.9 feet; Valdobbia, 2,548.0 meters or 8,359.3 feet; Bergamo, 379.6 meters, or 1,245 3 feet; Mondovi, 556 meters, or 1,824.2 feet; Siena, 348.5 meters, or 1,143.3 feet; Urbino, 451 meters, or 1,479.7 feet; Caltanissetta, 570.3 meters, or 1,871.0 feet.

JAPANESE SERIES.

Furnished by the coöperation of the Imperial University of Tokei, Japan.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Tokei																			Prof. P. V. Veeder.

Note.—The originals give the amount of cloudiness by the scale 0 to 4 without distinguishing between upper and lower clouds. The rain-fall is measured at 7 a. m., local time.

By authority of the SECRETARY OF PUBLIC WORKS.

MEXICAN SERIES.

Furnished by the coöperation of Señor Mariano Barcena, Director of the Central Meteorological Observatory in the City of Mexico.

STATIONS.	Barometer: Corrected for instrumental error and temperature. Inches.	Barometer: Corrected for instrumental error and temperature. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Upper. 1—10.	Clouds. Amount. Lower. 1—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Mexico																			Mariano Barcena. Vicente Reyes. Miguel Perez. (Engineers in charge.)

NOTE.—The elevation of Mexico is 2,290 meters, or 7,512.9 feet. The rain-fall is measured at 6 a. m., local time.

NETHERLANDS' SERIES.

Furnished by the cooperation of Professor Buys Ballot, Director of the Royal Meteorological Institute of the Netherlands at Utrecht.

Flushing			29.59	751.5	44.2	6.8		WNW			5					0.028	0.7	
Groningen			29.36	745.7	40.1	4.5		WNW								0.067	1.7	
Helder			29.42	747.3	44.2	6.8		W			4					0.157	4.0	
Utrecht			29.46	748.3	42.8	6.0	96	SW			4		10			0.189	4.8	Overcast.

NOTE.—The originals give the wind-pressure in kilograms per square meter; for Utrecht, they give the weather as published, from which the amount of cloudiness is taken by the scale 0 to 4, without distinguishing between upper and lower clouds. It is assumed that the barometer readings have been reduced to sea-level.

NORWEGIAN SERIES.

Furnished by the coöperation of Professor H. Mohn, Director of the Royal Norwegian Meteorological Institute at Christiania.

Bergen			28.93	734.8	34.2	1.2	96	S	18.1	8.1			10			0.402	10.2	Rain & snow
Brönö			29.14	740.2	18.7	— 7.4	61	E	39.6	15			2			0	0	
Christiania			29.21	742.0	22.3	— 5.4	85	NNW	2.0	0.9			10					Snowing.
Tromsö			29.45	747.9	12.7	—10.7	29	S	4.5	2			0			0	0	

NOTE.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols. The cloudiness and weather at Bergen refer to 2h., p. m., local time, instead of 1h., 4 min.

PORTUGUESE SERIES.

Furnished by the coöperation of J. C. de Brito Capello, Director of the Meteorological Observatory of the Infante Don Luiz at Lisbon.

Angra, (Azores)			30.49	774.5	56.8	13.8	79	SE	7.4	3.3			7			0	0	Dr. J. A. Sampaio.
Campo Major			30.09	764.3	51.8	11.0	36	N	18.6	8.3			3			0	0	Dr. A. M. R. dos Santos.
Funchal, (Madeira)			30.22	767.5	62.6	17.0	58	Calm	0	0			7			0.087	1.2	Capt. D. A. de Cunha.
Lisbon			30.10	766.0	52.7	11.5	46	NNE	12.5	5.6			1			0.063	0.2	The Observatory.
Ponta Delgada, (Azores)			30.48	774.2	58.6	14.8	63	ENE					2			0	0	

NOTE.—The originals give the wind-velocity in kilometers per hour, occasionally, the weather by the Vienna symbols; the amount of cloudiness without distinguishing between upper and lower clouds; the barometer corrected but not reduced to sea-level. The rain-fall at Lisbon is measured at noon, instead of 0 h. 6 m., p. m.

RUSSIAN SERIES.

Furnished by the coöperation of Professor H. Wild, Director of the Imperial Central Physical Observatory of Russia, at St. Petersburg.

Warsaw			29.57	751.0	38.1	0.6	85	WSW	13	6			4					Astronomical Obs.
Wilna			29.42	747.2	31.3	— 0.4	82	W	2	1			10					Astronomical Obs.
Dorpat			29.31	744.4	25.9	— 3.4	89	NNW	2	1			10					Physical Cabinet.
St. Petersburg			29.28	743.6	24.8	— 4.0	91	SSE	11	5			10					Light snow.
Kuopio			29.31	744.4	19.4	— 7.0	100	E	13	6			10					Central Physical Obs.
Kieff			30.02	744.7	28.0	— 1.9	88	NW	7	3			10					Ch. Forsten.
Nikolaiev			29.54	750.3	41.4	5.2	74	WNW	18	8			8					Light snow.
Kertch			29.42	747.3	46.2	7.9	90	SE	9	4			10					Physical Cabinet.
Moscow			29.50	749.2	14.2	— 9.9	87	S	7	3			10					Kordakof.
Lugan			29.49	749.0	38.5	3.6	85	S	9	4			10					Raining.
Archangel			29.47	748.4	14.4	— 9.8	94	E	18	8			10					Snowing.
Tiflis	28.44	722.4	29.85	758.2	55.4	13.0	48	NE	4	2			7					Lagorio.
Astrakhan			29.93	760.1	31.3	— 0.4	94	ESE	2	1			10					Meteorological Obs.
Kasan			29.96	761.0	3.0	—16.1	87	S	9	4			10					Meteorological Obs.
Orenburg			29.96	760.9	23.2	— 4.9	88	W	18	6			10					Meteorological Obs.
Ekaterinburg	29.15	740.5	30.16	766.1	22.1	— 5.5	36	SE	2	1			1					Meteorological Obs.
Nukuss			30.11	764.9	36.3	2.4	72	ENE	7	3			1					Ogoroinikof.
Kasaly																		Physical Observatory.
Tashkend	28.56	725.3	30.32	770.0	45.1	7.3	86	Calm	0	0			10					Sebastianof.
Barnaul			30.47	773.9	6.9	—14.3	66	Calm	0	0			9					Physical Cabinet.
Yeniseisk			30.01	762.3	16.3	— 8.7	80	WSW	9	4			4					Tschernichef.
Irkutsk																		Meteorological Obs.
Peking, (China)			30.47	773.8	30.4	— 0.9	69	Calm	0	0			0					Heavy rain.
Nertchinsk																		Bohrof.
Vladivostock																		Michelson.
Nikolaievsk, on the Amoor																		Meteorological Obs.
																		Marks.
																		Usolzef.
																		Physical Observatory.
																		Meteorological Obs.

NOTE.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols; they omit the rain-fall. The elevation of Tiflis is 469 meters, or 1,540.8 feet; Ekaterinburg, 306.4? m., or 1,005.2? ft.; Tashkend, 494.2? m., or 1,621.3? ft.; Irkutsk, 392 m., or 1,286 ft.; Nertchinsk, 592.0? m., or 1,942.2? ft.

SPANISH SERIES.

Furnished by the cooperation of Antonio Aguilar, Director of the Royal Observatory at Madrid, and of Don Cecilio Pujazon, Captain R. N. Director of the Naval Observatory at San Fernando.

Madrid			30.04	762.9	47.1	8.4	45	N	26.8	12.0		0	3			0	0	Cloudy.
San Fernando			30.05	763.2	54.0	12.2	32	NNE	15.2	6.8		0	3		NNE	0	0	

NOTE.—The originals give the weather in general terms, as published; rain-fall for San Fernando from preceding to following midnight; wind-velocity for Madrid in kilometers per hour.

SWEDISH SERIES.

Furnished by the coöperation of Professor R. Rubenson, Director of the Royal Swedish Meteorological Institute, at Stockholm, and of Dr. H. H. Hildebrandsson, Chief of the Meteorological Division of the Upsala Observatory.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Haparanda			29.47	748.6	2.5	—16.4	100	N			2		2			0	0		
Umea																			
Hernosand			29.36	745.7	15.1	— 9.4	100	ENE			2		10			0.051	1.3		
Stockholm			29.29	744.0	23.9	— 4.5	98	NNE			4		10			0.169	4.3		
Wisby			29.35	745.4	32.7	0.4	89	WSW			4		7			0.024	0.6		
Sub-Series.																			
Upsala			29.32	744.6	19.2	— 7.1	86	NW	0	0			8		E	0.176	4.47		Dr. Hildebrandsson.

Note.—The originals give the wind-force by the scale 0 to 6, and Upsala also velocity in meters per second; occasionally, the weather by the Vienna symbols, or in general terms; no distinction between the amount of upper and lower clouds. The rain-fall is measured at 8 a. m., local time.

SWISS SERIES.

Furnished by the coöperation of Professor R. Wolf, Director of the Observatory at Zurich, and of Professor E. Plantamour, Director of the Observatory at Geneva.

Geneva	28.47	723.2	29.94	760.5	40.8	4.9	42	SW			1		8			0	0	Variety	The Observatory.
Zurich	28.24	717.2	29.94	760.5	35.4	1.9	68	NW			1		3			0.039	1.0	Fair	The Observatory.

Note.—For Geneva the corresponding departures from the normal values are: Barometer, —1.6 mm; Thermometer, 0.0 cent.; Relative Humidity, —2 per cent.

Note.—The rain-fall is measured at Zurich at 7 a. m. on the following day. The originals give the barometer corrected but not reduced to sea-level; the wind-force by the scale 0 to 4 for Zurich; the amount of cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The elevation of Geneva is 408 meters, or 1,339 feet, and that of Zurich 470 meters, or 1,542 feet.

TURKISH SERIES.

Furnished by the cooperation of A. Coumbary, Effendi, Director of the Central Observatory at Constantinople, and of Professor C. V. A. Van Dyck, Superintendent of the Lee Observatory at Beirut.

Constantinople																			
Fao, (Persian Gulf)																			
Salonica																			
Valona																			
Varna																			
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y			30.26	768.5	72.3	22.4	47	W			1		7c			0	0	*D. clouds	Prof. C. V. A. Van Dyck

Note.—The originals give the wind-force by the scale 0 to 7, (except Beirut, by the scale 0 to 12, and Constantinople velocity in meters per second;) the weather in general terms as published; no distinction between upper and lower clouds, and, except Constantinople and Beirut, the amount by the scale 0 to 4. It is assumed that the barometer is reduced to sea-level. *Detached clouds.

CANADIAN SERIES.

Furnished by the cooperation of Professor G. T. Kingston, Director of the Magnetic Observatory at Toronto, and Superintendent of the Meteorological Office of the Dominion of Canada, and the respective Observers. Those marked with a star (*) are also telegraphed daily to the office of the Chief Signal Officer, U. S. Army.

Bathurst, N. B			30.01	762.2	32.7	0.4	87	NE	7.5	3.4			10						Hon. J. Ferguson.
Brockville, Ontario			29.82	757.4	33	0.6		E	18	8.0			10s		E	0	0	Cloudy	W. R. Bigg.
*Chatham, N. B			30.00	762.0	34	1.1	86	N	5	2.2			10s		N	Inap.	Inap	Light rain	G. A. Blair.
Charlottetown, P. E. Island			29.91	759.7	33	0.6	98	N	8	3.6			10n			0.050	1.27	Cloudy	H. J. Cundall, C. E.
Cornwall, Ontario			29.82	757.4	31.9	— 0.1	84	E			5		10s			0	0	Stormy	James Smith, M. A.
Dalhousie, N. B			30.10	764.5	25.8	— 3.4	96	NW			1					0	0	Overcast	H. A. Johnson.
Esquimault, B. C			29.86	758.4	37.1	2.8	96	Calm				0	0			0	0	Clear	W. H. Bevis.
*Father Point, Quebec			30.16	766.1	27	— 2.8	90	Calm	0	0			10n			0	0	Threatening	J. McWilliams.
Fredericton, N. B			30.00	762.0	31.0	— 0.6	87	Calm	0	0			10s			Inap.	Inap.	Cloudy	Prof. Harrison.
*Fort Garry, Manitoba			29.46	748.3	1	—17.2	85	E	6	2.7		0	0			0	0	Clear	James Stewart.
Goderich, Ontario			29.83	757.7	32 6	0.3	87	NE			2	3k	0			0	0	Fair	H. J. Strang, M. A.
Granton, Ontario	28.63	727.2	29.76	755.9	35.0	1.7		NE			1		10n			0	0	Cloudy	James Grant.
*Halifax, N. S			29.85	758.2	32	0.0	95	N	5	2.2			10n			0	0	Cloudy	F. Allison, M. A.
Hamilton, Ontario			29.84	757.9	36.2	2.3	60	SW			0	10cs	0			0	0	Cloudy	G. Dickson.
Heart's Content, N. F			29.81	757.2	43	6.1	92	E			2		10			0.09	2.3	Overcast	E. Weedon.
*Kingston, Ontario			29.80	756.9	30	2.2	77	NE	11	4.9			10s			0	0	Cloudy	S. Woods, M. A
*Montreal, Quebec			29.72	760.0	30	— 1.1	89	NE	25	11.2			10n		NE	0	0	Cloudy	C. H. McLeod, C. E.
*Ottawa, Ontario			29.84	757.9	38	3.3	67	NE	14	6.3		2cs	5ks	N	NE	0	0	Fair	J. B. Haney.
*Parry Sound, Ontario			29.93	760.2	24	— 4.4	80	N	18	8.0		2cs	2ks	SE	SE	0	0	Fair	Rev. R. Mosley.
Port Dover, Ontario			29.71	754.6	35	1.7	80	NE	16	7.2		10k	0	NW		0.10	2.5	Fair	H. Morgan.
Port Hastings, N. S			29.84	757.9	32.0	0.0		NW								0	0	Foggy	Peter Grant
Port Stanley, Ontario			29.74	755.4	36	2.2	77	NE	8	3.6			10ks		E	0.04	1.0	Cloudy	M. Payne.
*Quebec, Quebec			30.06	763.5	30	— 1.1	100	NE	30	13.4			10n		NE	0	0	Cloudy	Capt. Ashe, R. N.
*Rockliffe, Ontario			29.99	761.7	29	— 1.7	76	SE	6	2.7		10cs	2s	SE	SE	0	0	Fair	
St. John, N. B			29.94	760.5	31	— 0.6	94	NE	4	1.8			10n			0	0	Overcast	G. Murdoch, C. E.
*Saugeen, Ontario			29.86	758.4	27	— 2.8	88	Calm	0	0			10n			0	0	Cloudy	K. Stewart.
Stayner, Ontario			29.83	757.7	30	— 1.1	79	NW	6	2.7			8ks		E	0	0	Cloudy	R. J. Cole.
Stratford, Ontario	28.45	722.6	29.76	755.9	34.0	1.1	78	E	8	3.6			10s			0	0	Cloudy	C. J. MacGregor, M. A.
*Sydney, C. B			29.86	758.4	35	1.7	98	N	3	1.3			Fog			0.15	3.8	Cloudy	T. C. Hill.
*Toronto, Ontario			29.76	755.9	38	3.3	68	NE	9	4.0			10n		NE	0	0	Cloudy	Magnetic Observatory.
Woodstock, Ontario			29.76	755.9	34.5	1.4	87	N	9	4.0		5ks	5s	E		Inap.	Inap.	Cloudy	J. Montgomery.
Sub-Series.																			
St. Johns, Newfoundland			29.92	760.0	37.5	3.1	100	E					10n			0.33	8.4	Foggy	John Delany.

Note.—The originals for Brockville, Charlottetown, Port Dover, Port Stanley, Stayner, St. Johns, N. F. and those telegraphed, give the amount of cloudiness by the scale 0 to 4. The elevation of Granton is 1,015 feet, or 309.4 m.; Stratford, 1,182 feet or 360.3 m.

UNITED STATES SERIES.

Furnished by the coöperation of Bvt. Brig. Gen. Albert J. Myer, Chief Signal Officer, U. S. Army.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Upper. 0—10.	Clouds. Amount. Low'r. 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Albany, N. Y.	.....	.....	29.69	754.1	40	4.4	82	N	2	0.9	.....	.....	10ks	.....	E	0	0	Cloudy	
Alpena, Mich.	.....	.....	30.00	762.0	25	— 3.9	75	N	12	5.4	.....	.....	10s	.....	N	0	0	Cloudy	
Atlantic City, N. J.	.....	.....	29.36	745.7	40	4.4	100	NE	2	0.0	.....	.....	Fog	.....	.....	0.62	15.7	Foggy	
Augusta, Ga.	.....	.....	29.85	758.2	42	5.6	83	W	4	1.8	.....	0	0	.....	.....	0.02	0.5	Clear	
Baltimore, Md.	.....	.....	29.47	748.5	36	2.2	90	N	12	5.4	.....	.....	10n	.....	N	1.61	40.9	Light snow	
Barnegat, N. J.	.....	.....	29.36	745.7	38	3.3	95	E	40	17.9	.....	.....	10n	.....	E	1.04	26.4	Light rain	
Bismarck, Dakota	28.33	719.6	30.11	764.8	16	— 8.9	66	NE	3	1.3	.....	0	0	.....	.....	0	0	Clear	
Boston, Mass.	.....	.....	29.74	755.4	35	1.7	90	NE	29	13.0	.....	.....	10s;hz	.....	NE	0	0	Threatening	
Breckenridge, Minn.	.....	.....	30.27	768.8	7	—13.9	77	N	8	3.6	.....	0	0	.....	.....	0	0	Clear	
Buffalo, N. Y.	.....	.....	29.66	753.4	35.0	1.7	80	E	12	5.4	.....	.....	10s	.....	E	0	0	Cloudy	
Burlington, Vt.	.....	.....	29.80	756.9	34	1.1	70	N	3	1.3	.....	.....	10s	.....	.....	0	0	Cloudy	
Cairo, Ill.	.....	.....	29.99	761.7	34	1.1	79	NW	10	4.5	.....	.....	10s	.....	.....	0.07	1.8	Cloudy	
Cape Hatteras, N. C.	.....	.....	29.60	751.8	48	8.9	77	W	15	6.7	.....	1ck	Haze	W	.....	0.08	2.0	Fair	
Cape Henry, Va.	.....	.....	29.54	750.3	44	6.7	84	SW	16	7.2	.....	0	Haze	.....	.....	0.18	4.6	Clear	
Cape Lookout, N. C.	.....	.....	29.70	754.4	48	8.9	82	W	24	10.7	.....	0	0	.....	.....	0.39	9.9	Clear	
Cape May, N. J.	.....	.....	29.36	745.7	41	5.0	91	SW	22	9.8	.....	.....	10s	.....	SW	1.85	47.0	Cloudy	
Charleston, S. C.	.....	.....	29.85	758.2	46	7.8	69	W	8	3.6	.....	5c	2cs	W	W	0	0	Fair	
Cheyenne, Wyoming	23.81	604.8	29.75	755.6	26	— 3.3	77	W	8	3.6	.....	0	1s	.....	.....	0	0	Clear	
Chicago, Ill.	.....	.....	29.89	759.2	30	— 1.1	78	N	11	4.9	.....	.....	10n	.....	.....	Inap.	Inap.	Light snow	
Cincinnati, Ohio.	.....	.....	29.70	754.4	38	3.3	80	NW	6	2.7	.....	.....	10s	.....	.....	0.39	9.9	Cloudy	
Cleveland, Ohio.	.....	.....	29.70	754.4	33	0.6	95	N	8	3.6	.....	.....	10s	.....	N	0.10	2.5	Cloudy	
Corsicana, Tex.	.....	.....	30.07	763 8	38	3.3	71	NE	2	0.9	.....	2cs	0	.....	.....	0	0	Clear	
Davenport, Iowa.	.....	.....	30.06	763.5	25	— 3.9	75	N	13	5.8	.....	.....	10s	.....	.....	0.04	1.0	Cloudy	
Denison, Tex.	.....	.....	30.11	764.8	33	0.6	89	NW	4	1.8	.....	5cs	2s	.....	.....	0	0	Fair	
Denver, Col.	24.59	624.6	29.81	757.2	31	— 0.6	79	S	3	1.3	.....	0	0	.....	.....	0	0	Clear	
Detroit, Mich.	.....	.....	29.73	755.1	32	0.0	79	N	10	4.5	.....	.....	10s	.....	N	0.02	0.5	Cloudy	
Dodge City, Kan.	27.76	705.1	29.76	756.0	27	— 2.8	88	NE	3	1.3	.....	0	0	.....	.....	0	0	Clear	
Dubuque, Iowa.	.....	.....	30.06	763.5	25	— 3.9	75	N	7	3.1	.....	.....	10s	.....	.....	0.15	3.8	Cloudy	
Duluth, Minn.	.....	.....	30.24	768.1	20	— 6.7	84	NE	10	4.5	.....	.....	10s	.....	.....	0	0	Cloudy	
Eastport, Me.	.....	.....	29.91	759.7	33	0.6	79	N	12	5.4	.....	.....	10s	.....	NE	0	0	Cloudy	
Erie, Pa.	.....	.....	29.67	753.6	35	1.7	90	NE	4	1.8	.....	.....	10s	.....	.....	1.17	4.3	Cloudy	
Escanaba, Mich.	.....	.....	30.08	764.0	18	— 7.8	84	N	20	8.9	.....	.....	10s	.....	N	0.07	1.8	Cloudy	
Fort Gibson, Indian Ter.	.....	.....	30.05	763.3	35	1.7	80	NW	2	0.9	.....	.....	10s	.....	.....	0	0	Cloudy	
Ft. St. Michael, Alaska.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Fort Sill, Indian Ter.	28.84	732.5	30.00	762.0	34	1.1	61	NE	6	2.7	.....	2k	0	W	.....	0	0	Fair	
Fort Sully, Dakota.	28.34	719.8	30.11	764.5	20	— 6.7	85	SE	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Florence, Arizona.	28.16	715.3	29.63	752.6	60	15.6	.....	SW	.....	.....	.....	2k	0	SW	.....	0	0	Fair	
Galveston, Tex.	.....	.....	30.05	763.3	50	10.0	71	NE	5	2.2	.....	0	0	.....	.....	0	0	Clear	
Grand Haven, Mich.	.....	.....	29.89	759.2	28	— 2.2	82	NE	11	4.9	.....	.....	10s	.....	NE	0	0	Cloudy	
Indianapolis, Ind.	.....	.....	29.82	757.4	34	1.1	84	NW	10	4.5	.....	.....	10n	.....	.....	0.66	1.6	Light snow	
Indianola, Tex.	.....	.....	30.04	763.0	63	11.7	80	NE	16	7.2	.....	5cs	0	N	.....	0	0	Fair	
Jacksonville, Fla.	.....	.....	29.94	760.5	60	10.0	58	W	6	2.7	.....	5cs	0	.....	.....	0	0	Fair	
Keokuk, Iowa.	.....	.....	29.96	761.0	29	— 1.7	78	N	7	3.1	.....	.....	10s	.....	N	0.07	1.8	Cloudy	
Key West, Fla.	.....	.....	29.99	761.7	60	15.6	100	NE	2	0.9	.....	.....	10n	.....	.....	0.20	5.1	Light rain	
Kittyhawk, N. C.	.....	.....	29.63	752.6	45	7.2	84	SW	18	8.0	.....	Haze	Haze	.....	.....	1.02	25.9	Hazy	
Knoxville, Tenn.	.....	.....	29.82	757.4	40	4.4	73	S	10	4.5	.....	.....	10ks	.....	W	0.14	3.6	Cloudy	
La Crosse, Wis.	.....	.....	30.09	764.3	23	— 5.0	73	N	10	4.5	.....	.....	10s	.....	N	0	0	Cloudy	
Leavenworth, Kan.	.....	.....	30.07	763.8	30	— 1.1	65	N	8	3.6	.....	.....	10s	.....	.....	Inap.	Inap.	Cloudy	
Louisville, Ky.	.....	.....	29.84	757.9	35	1.7	80	W	12	5.4	.....	.....	10s	.....	W	0.08	2.0	Cloudy	
Lynchburg, Va.	.....	.....	29.54	750.3	44	6.7	60	W	6	2.7	.....	0	0	.....	.....	0.38	9.7	Clear	
Malone, N. Y.	.....	.....	29.79	756.7	34	1.1	80	E	6	2.7	.....	.....	10s	.....	E	0	0	Cloudy	
Marquette, Mich.	.....	.....	30.13	765.3	20	— 6.7	70	N	12	5.4	.....	.....	10s	.....	.....	0	0	Cloudy	
Memphis, Tenn.	.....	.....	30.05	763.3	42	5.6	76	W	5	2.2	.....	.....	10s	.....	NW	0.02	0.5	Cloudy	
Milwaukee, Wis.	.....	.....	29.98	761.5	24	— 4.4	87	N	13	5.8	.....	.....	10n	.....	.....	0.02	0.5	Light snow	
Mobile Ala.	.....	.....	30.00	762.0	43	6.1	76	N	1	0.4	.....	0	0	.....	.....	0	0	Clear	
Montgomery, Ala.	.....	.....	29.99	761.7	41.5	5.3	82	NW	4	1.8	.....	.....	10ks	.....	NW	0	0	Cloudy	
Morgantown, W. Va.	28.54	724.9	29.59	751.6	40	4.4	91	E	1	0.4	.....	.....	10n	.....	NE	0.22	5.6	Light rain	
Mt. Washington, N. H.	23.42	594.9	29.78	756.4	23	— 5.0	86	NE	54	24.1	.....	10s	8s	NE	NE	0	0	Cloudy	
Nashville, Tenn.	.....	.....	29.91	759.7	41	5.0	83	NW	8	3.6	.....	.....	10s	.....	NW	0.29	7.4	Cloudy	
New Haven, Conn.	.....	.....	29.54	750.3	33	0.6	100	NE	35	15.6	.....	.....	10n	.....	.....	Inap.	Inap.	Heavy snow	
New London, Conn.	.....	.....	29.63	752.6	33	0.6	100	NE	19	8.5	.....	.....	10n	.....	.....	0.29	7.4	Heavy snow	
New Orleans, La.	.....	.....	30.01	762.2	49	9.4	67	N	1	0.4	.....	0	Sm'k	.....	N	0	0	Clear	
Newport, R. I.	.....	.....	29.67	753.6	37	2.8	80	NE	9	4.0	.....	.....	10n	.....	NE	Inap.	Inap.	Heavy snow	
New York, N. Y.	.....	.....	29.49	749.0	39	3.9	94	NE	29	13.0	.....	.....	10n	.....	NE	0.52	13.2	Light rain	
Norfolk, Va.	.....	.....	29.57	751.1	44	6.6	75	SW	12	5.4	.....	2k	Haze	W	.....	0.60	15.2	Fair	
North Platte, Neb.	27.04	686.8	29.75	755.6	20	— 6.7	85	E	4	1.8	.....	2cs	0	W	.....	0	0	Clear	
Omaha, Neb.	28.93	734.8	30.08	764.0	23	— 5.0	78	N	3	1.3	.....	0	0	.....	.....	0	0	Clear	
Oswego, N. Y.	.....	.....	29.69	754.1	34.5	1.4	79	NE	8	3.6	.....	.....	10s	.....	E	0	0	Cloudy	
Pembina, Dakota.	.....	.....	30.41	772.4	0	—17.8	85	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Philadelphia, Pa.	.....	.....	29.40	746.7	34	1.1	89	E	34	15.2	.....	.....	10s	.....	E	0.48	12.2	Cloudy	
Pike's Peak, Col.	17.54	445.5	29.75	755.6	7.6	—13.6	65	NW	14	6.3	.....	0	0	.....	.....	Inap.	Inap.	Clear	
Pittsburgh, Pa.	.....	.....	29.59	751.6	37	2.8	90	N	3	1.3	.....	.....	10n	.....	N	0.36	9.1	Light rain	
Port Huron, Mich.	.....	.....	29.74	755.4	31	— 0.6	89	N	22	9.8	.....	.....	10s	.....	E	0	0	Threatening	
Portland, Me.	.....	.....	29.82	757.4	34	1.1	70	NE	21	9.4	.....	.....	8s;hz.	.....	.....	0	0	Cloudy	
Portland, Oregon	.....	.....	30.01	762.2	41	5.0	91	S	2	0.9	.....	.....	10n	.....	.....	1.16	29.5	Light rain	
Punta Rassa, Fla.	.....	.....	29.98	761.5	63.5	17.5	86	SW	12	5.4	.....	.....	10s	.....	SW	0.44	11.2	Cloudy	
Rochester, N. Y.	.....	.....	29.69	754.1	34	1.1	89	NE	11	4.9	.....	.....	10s	.....	E	0	0	Cloudy	
Salt Lake City, Utah.	25.59	650.0	29.92	760.0	38	3.3	80	NW	3	1.3	.....	.....	10s	.....	.....	Inap.	Inap.	Cloudy	
Sandy Hook, N. J.	.....	.....	29.45	748.0	35	1.7	100	NE	52	23.2	.....	.....	10n	.....	NE	0.38	9.7	Light rain	
San Diego, Cal.	.....	.....	29.82	757.4	57	13.9	81	SE	2	0.9	.....	.....	10s	.....	SE	0	0	Cloudy	
San Francisco, Cal.	.....	.....	29.91	759.7	49	9.4	71	NW	4	1.8	.....	8cs	0	.....	.....	0	0	Fair	
Santa Fé, N. M.	23.08	586.2	29.62	752 8	31	— 0.6	49	NE	2	0.9	.....	5k	0	.....	.....	0	0	Fair	
Savannah, Ga.	.....	.....	29.89	759.2	48	8.9	70	W	8	3.6	.....	10cs	Sm'k	S	.....	0	0	Cloudy	
Shreveport, La.	.....	.....	30.12	765.0	30	8.9	82	NW	3	1.3	.....	Haze	0	.....	.....	0	0	Clear	
Smithville, N. C.	.....	.....	29.75	755.6	46	7.8	77	W	8	3.6	.....	0	0	.....	.....	0.58	14.7	Clear	
Springfield, Mass.	.....	.....	29.70	754.4	37.5	3.1	62	NE	14	6.3	.....	.....	10s	.....	NE	0	0	Threatening	
St. Louis, Mo.	.....	.....	29.99	761.7	30	— 1.1	89	N	12	5.4	.....	.....	10s	.....	.....	0.36	9.1	Cloudy	
St. Marks, Fla.	.....	.....	29.96	761.0	44	6.7	75	N	3	1.3	.....	8cs	0	SW	.....	0	0	Fair	
St. Paul, Minn.	.....	.....	30.10	764.5	23	— 5.0	86	N	10	4.5	.....	.....	10s	.....	N	0	0	Cloudy	
St. Paul's Island, Alaska.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Thatcher's Island, Mass.	.....	.....	29.78	756.4	36	2.2	80	NE	28	12.5	.....	.....	10s	.....	NE	0	0	Cloudy	
Toledo, Ohio.	.....	.....	29.75	755.6	33	0.6	79	N	7	3.1	.....	.....	10n	.....	N	0.03	0.8	Light snow	
Tucson, Arizona.	27.28	692.9	29.84	757.9	43	6.1	.....	S	.....	.....	.....	0	0	.....	.....	0	0	Clear	
Tybee Island, Ga.	.....	.....	29.86	758.4	44	6.7	83	W	4	1.8	.....	5cs	0	W	.....	0	0	Fair	
Vicksburg, Miss.	.....	.....	30.07	763.8	40	4.4	86	NW	2	0.9	.....	0	0	.....	.....	0	0	Clear	
Virginia City, M. T.	24.14	613.1	29.62	752 3	23	— 5.0	73	Calm	0	0	.....	0	0	.....	.....	0.18	4.6	Clear	
Washington, D. C.	.....	.....	29.61	749.5	35	1.7	90	NW	10	4.5	.....	.....	10s	.....	NW	0.98	24.9	Cloudy	
Wilmington, N. C.	.....	.....	29.74	755.4	45	7.2	75	W	10	4.5	.....	2c	0	W	.....	0.45	11.4	Fair	

UNITED STATES SERIES.—CONTINUED.

STATIONS.	BAROMETER. Corrected for instrum'tal error and temperature. Inches.	BAROMETER. Corrected for instrum'tal error and temperature. Millimeters.	BAROMETER. Reduced to sea-level. Inches.	BAROMETER. Reduced to sea-level. Millimeters.	TEMPERATURE OF THE AIR. Fahrenheit.	TEMPERATURE OF THE AIR. Centigrade.	RELATIVE HUMIDITY. Per cent.	WIND. Direction. From—	WIND. Velocity. Miles per hour.	WIND. Velocity. Meters per second.	WIND. Force. 0—10.	CLOUDS. Amount. Under 0—10.	CLOUDS. Amount. Low'r 0—10.	CLOUDS. Direction. Upper. From—	CLOUDS. Direction. Lower. From—	RAIN-FALL OR MELTED SNOW IN THE PAST 24 HOURS. Inches.	RAIN-FALL OR MELTED SNOW IN THE PAST 24 HOURS. Millimeters.	WEATHER.	OBSERVER.
Wood's Holl, Mass	.....	.....	29.66	7 3.4	37	2.8	71	E	10	4.5	.....	.....	10n	.....	E	Inap.	Inap.	Light hail....	
Yankton, Dakota	28.82	732.0	30.21	767.3	18	— 7.8	68	Calm	0	0	.....	0	0	.....	.....	0	0	Clear.....	
Yuma, Arizona	.....	.....	29.70	754.4	58	14.4	.....	SE	.....	.....	.....	0	0	.....	.....	0	0	Clear	
SUB-SERIES.																			
Kingston, Jamaica, W. I	.....	.....	30.17	766.3	80	26.7	74	Calm	0	0	.....	8c	2s	.....	.....	0	0	.....	James Gall.
Navassa, W. I	.....	.....	.....	.....	79	26.1	.....	E	.....	.....	3	.....	.....	.....	.....	1.52	38.6	.....	Dr. G. H. Davison.
Clifton, Ja., W. I	27.20	690.9	30.00	762.0	64	17.8	78	E	1.0	0.4	.....	2c	0	E	.....	0	0	Fine.....	C. Partridge.
Paramaribo, D. Guiana, S.A	.....	.....	30.04	763.0	80	26.7	82	E	.....	.....	3	5k	6ks	E	.....	0.110	2.79	¼ cloudy.....	C. J. Hering.
Batavia, Dutch Guiana, S.A.	30.07	763.8	.....	.....	80 6	27.0	.....	E	.....	.....	.....	.....	.....	.....	.....	0.028	0.70	Showery.....	Dr. H. Groot.
Medellin, Colombia, S. A	25.22	640.6	.....	.....	68.0	20.0	73	Calm	.....	.....	0	0	0	.....	.....	0	0	Clear.....	Thomas Herran.
York Factory, B. A	.....	.....	30.61	777.5	— 3.0	—19.4	83	S	1	0.4	.....	0	0	.....	.....	0	0	Clear	J. Fortescue, W. Wood
Honolulu, Oahu, H. I	.....	.....	30.03	762.7	69	20.6	95	SSE	.....	.....	2	.....	.....	.....	.....	0	0	Clear	Daniel Smith.
Makawao, Maui, H. I	.....	.....	29.93	760.2	63	17.2	79	N	.....	.....	1	0	Fog	.....	.....	0	0	Misty.....	F. L. Clarke

NOTE.—The originals give the amount of cloudiness by the scale 0 to 4, except York Factory, Makawao, Medellin and Paramaribo. The elevation of the barometer at Bismarck is 1,677 feet, or 511.1 meters; Cheyenne, 6,057.3 ft., or 1,846.2 m.; Clifton, about 2,892 ft., or 881.5 m.; Denver, 5,135 ft., or 1,565.2 m.; Dodge City, 2486ft., or 757.6 m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Florence, 1,550 (?) ft., or 472.5 (?) m.; Makawao, 7,205 ft., or 672.1 m.; Morgantown, 1,027.9 ft., or 313.3 m.; Medellin, 4,876 ft., or 1,486.2 m.; Mt. Washington, 6,286 ft., or 1,915.6 m.; North Platte, 2,846 ft.. or 867.4 m.; Omaha, 1,054.6 ft., or 321.4 m.; Pike's Peak, 14,150.7 ft., or 4,313.1 m.; Salt Lake City, 4,362.2 ft., or 1,329.6 m.; Santa Fé, 6,862.2 (?) ft., or 2,091.6 (?) m.; Tucson, 2,545 (?) ft., or 775.7 (?) m.; Virginia City, 5,480 (?) ft., or 1,670.3 (?) m.; Yankton, 1,278 ft., or 389.5 m. The following constants are added in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Denver, 5.22 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fé, 6.54 in.; Tucson, 2.59 in.; Virginia City, 5.48 in. The elevation of Batavia is about 6 feet; the barometric readings need the addition of 0.2 mm. or 0.01 in. for reduction to sea-level.

UNITED STATES NAVAL SERIES.

By authority of the **SECRETARY OF THE NAVY.**
Furnished by the coöperation of the Navy Department, through Commodore Daniel Ammen, U. S. N., Chief of Bureau of Navigation.

STATIONS AND VESSELS.	True course toward—	Hourly rate in knots.	*Barometer as reported.		Temperature of the Air.		Relative Humidity.	Wind.				Clouds.				Rain-fall or melted snow in the past 24 hours.		State of Ocean.	Direction of swell from—	Weather.	Observer.
								Direction.	Velocity		Force.	Amount.		Direction.							
												Up'er	Low'r	Up'er	Low'r						
			Inches.	Millimeters.	Fahrenheit.	Centigrade.	Per cent.	From—	Miles per hour.	Meters per second.	0—10.	0—10.	0—10.	From—	From—	Inches.	Millimeters.				
Naval Academy, Annapolis, Md.			29.12	739.6	35	1.7	70	NW			6		10			1.60	40.6			Raining	
Naval Hospital, Annapolis, Md.			29.51	749.5	34	1.1	90	NE			3		10			1.00	25.4			Rain & snow	
Navy Yard, Mare Island, Cal.			29.97	761.2	46	7.8		NNW			1		4			0	0			Pleasant	
Navy Yard, Norfolk, Va.			29.74†	755.4†	41	5.0	82	WSW	11	4.9			1c			0.60	15.2			Hazy	
Navy Yard, Pensacola, Fla.			30.02	762.5	46	7.8	69	WNW	2	0.9			2			0	0			‡D. clouds	
Navy Yard, Portsmouth, N.H.			29.79	756.7	33	0.6		NE	17	7.6			10		S&W	0	0			Cloudy	
¶ Canonicus, New Orleans, La.			29.93	760.2	47	8.3	92	NNE			2		0							Clear	
Colorado, New York, N. Y.			29.55	750.6	36	2.2		NE	12	5.4			10		SW	0.04	10.2			Raining	
Essex, Vera Cruz, Mex.			29.95	760.7	68	20.0	100	NW			6		10		SSE			Rough.	NNW	‡D. clouds	
¶ Gettysburg, San Remo, Italy.			29.75	755.0	57	13.9		ESE			4		5		SE			Moderate.	ESE	‡D. clouds	
Hartford, Hampton Roads, Va.			29.66	753.4	44	6.7		W			3		2			0.050	12.7			Hazy	
Huron, Charleston, S. C.			29.89	759.2	49	9.4	85	WNW			2–3		8							Hazy	
Lackawana, Mare Island, Cal.			30.20	767.1	50	10.0	86	Calm			0		6		E			Smooth		‡D. clouds	
Marion, Port Said, Egypt			30.07	763.8	69	20.6	90	NW			1		7		NE			Smooth		‡D. clouds	
Michigan, Erie, Pa.			29.18	741.2	34	1.1	79	NE			2		10		NE					Cloudy	
Monongahela, Baltimore, Md.			29.49	749.0	36	2.2		N			2–3		n							Drizzling	
New Hampshire, Port Royal, S. C.			30.02	762.5	50	10.0		WNW			3		8		E					‡D. clouds	
Omaha, Panama			30.05	763.3	74	23.3	95	NW			1		1			0.01	0.3	Smooth		Hazy	
Ossipee, Pensacola, Fla.			29.99	761.7	52	11.1		NNW			2		2							Hazy	
Pensacola, Panama			30.05	763.3	76	23.3	95	NW			1		1			0.001	0.03			Pleasant	
Plymouth, New Orleans, La.			29.99	761.7	51	10.6	79	NNE			1									Clear	
Ranger, Hampton Roads, Va.			29.70	754.4	43.5	6.4		WSW			5–6		8		N&E			Moderate.	NE	Hazy	
Richmond, Montevideo, Uruguay.			29.91	759.7	69.0	20.6	90	SSW			3		7		SSW					‡D. clouds	
¶ Rio Bravo, Matamoras, Mex.			29.88	758.9	55	12.8		Calm			0		7		SE					‡D. clouds	
Santee, Annapolis, Md.			29.52	749.8	36	2.2	100	NW			6		10							Raining	
St. Louis, League Island, Pa.			29.31	744.5	36	2.2		NE	20	8.9			10		NE	0.85	21.6			Threatening	
Vandalia, Constantinople, Turkey.			29.75	756.7	57	13.9	87	WSW			3		1		ENE					‡D. clouds	
Wabash, Boston, Mass.			29.86	758.4	38	3.3		NE	23	10.3						0	0			Threatening	
Wyoming, Washington, D. C.			29.73†	758.7†	36	2.2		WNW			2		0								

* It is not known that the barometer is corrected for temperature, instrumental error or elevation. † Aneroid Barometer. ‡ Detached clouds. ¶ Barometer corrected for instrumental error and reduced to sea-level.

UNITED STATES MARINE SERIES

REPORTED TO THE OFFICE OF THE CHIEF SIGNAL OFFICER OF THE ARMY.

NAMES OF VESSELS.	TRUE COURSE TOWARD—	HOURLY RATE IN KNOTS.	BAROMETER REDUCED TO SEA-LEVEL.		TEMPERATURE OF THE AIR.		RELATIVE HUMIDITY.	WIND.				CLOUDS.				STATE OF OCEAN.	DIRECTION OF SWELL FROM—	WEATHER.	OBSERVER
								Direction.	Velocity.		Force.	Amount.		Direction.					
												Up'er	Low'r	Upper.	Lower.				
			Inches.	Millimeters.	Fahrenheit.	Centigrade.	Per cent.	From—	Miles per hour.	Meters per second.	0—10.	0—10.	0—10.	From—	From—				
PACIFIC MAIL S. S. CO. MARINE SERIES. Furnished by the coöperation of ————, President; Williams, Blanchard & Co., Agents.																			
S. S. City of Peking																			Lt. Z. L. Tanner, U.S.N
OCCIDENTAL AND ORIENTAL S. S. CO. MARINE SERIES. Furnished by the coöperation of George H. Bradbury, President; T. H. Goodman, Agent.																			
S. S. Belgic																			Capt. John Metcalf.
S. S. Gaelic																			Capt. W. H. Kidley
S. S. Oceanic																			Capt. H. Parsell.
NORTH GERMAN LLOYD OF BREMEN MARINE SERIES. Furnished by the coöperation of A. Schumacher & Co., Agents.																			
S. S. Baltimore																			Capt. H. Andressen.
S. S. Berlin																			Capt. C. Pohle.
S. S. Braunschweig																			Capt. K. Undütsch.
S. S. Nürnberg																			Capt. A. Jaeger.
S. S. Ohio																			Capt. G. Meyer.
MARINE SERIES. (Miscellaneous.) Furnished by the coöperation of the Observer named.																			
Schooner Addie Fuller, Delaware Breakwater			29.30	744.2	40	4.4	91	W	20	8.9			10ks		W	Rough.			Capt. James Jorgensen

NOTE.—The schooner Addie Fuller gives the amount of cloudiness by the scale 0 to 4.

COLLATED AT THE OFFICE OF THE CHIEF SIGNAL OFFICER OF THE ARMY, WASHINGTON, D. C.

The records which appear in this Bulletin are copied from the regular exchanges of this office, made in each instance in compliance with an especial request and are published for the uses of the coöperating observers. The barometric readings in the first two columns are reduced to freezing and their respective standards: those in the second two also to mean sea-level. The "weather" is generally published as given.

When the distinction between the upper and lower strata of clouds is not reported, the *kinds* or *types*, viz: cirrus, cumulus, stratus, nimbus, scud, fracto-pallio, haze, fog and smoke, as indicated, respectively, by the letters c, k, s, n, d, f, p, hz., fg. and sm'e, are generally published with the amount in the lower-cloud column. The distinction between the upper and lower strata is carefully made in the United States Series and a portion of the Canadian Series, and the types are indicated by the above letters or their combinations in the proper column.

Albert J. Myer

Brig. Gen. (Bvt. Assg^d.) Chief Signal Officer, U. S. A.

BULLETIN

OF

INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON FEBRUARY 25, 1877.

7:35 A. M. WASHINGTON mean time.

6:7 A. M. MEXICO mean time.
7:7 A. M. SAN JOSE mean time.
0:6 P. M. LISBON mean time.
0:28 P. M. MADRID mean time.
0:43 P. M. GREENWICH mean time.
0:53 P. M. PARIS mean time.
1:1 P. M. BRUSSELS mean time.
1:4 P. M. UTRECHT mean time.
1:18 P. M. BERNE mean time.
1:26 P. M. CHRISTIANIA mean time.

1:33 P. M. COPENHAGEN mean time.
1:38 P. M. ROME mean time.
1:37 P. M. BERLIN mean time.
1:49 P. M. VIENNA mean time.
1:55 P. M. STOCKHOLM mean time.
2:18 P. M. ATHENS mean time.
2:39 P. M. CONSTANTINOPLE mean time.
2:44 P. M. ST. PETERSBURG mean time.
6:36 P. M. CALCUTTA mean time.
10:2 P. M. TOKEI mean time.

ALGERIAN SERIES.

Furnished by the coöperation of General d'Eudeville, Commandant Supérieur du Génie in Algeria.

STATIONS.	Barometer: Corrected for instrum'tal error and temperature. Inches.	Barometer: Corrected for instrum'tal error and temperature. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Nemours			30.11	764.7	48.6	9.2		SSE			2		6			1.142	29.0	Fair	Michel.
Algiers			30.00	762.1	54.1	12 3		NNE			1		1			0.78[illegible]	18.6	Clear	Biscarrat.
La Calle			29.91	759.7	59.5	15.3		N			2		2			0.276	7 0	Clear	Fleury.
Tunis			29.91	759.8	62.8	17.1		W			3		6			0	0	Fair	Jacques.
Sfax																			
Saida			30.05	763.3	46.6	8.1		NW			3		8			0.33[illegible]	8.5	Cloudy	Milliot.
Tebessa			29.96	760.9	47.1	8.4		W			3		6			0	0	Fair	Bourgeois.
Geriville			29.94	760.5	45.1	7.3		W			4		5			0	0	Fair	Lemaillot.
Laghouat			29.95	760.8	48.9	9.4		WNW			3		6			0.40[illegible]	10.2	Fair	Guyot.
Biskra			29.95	760.6	61.0	16.1		NW			3		8			0	0	Cloudy	Kuntz.

NOTE.—In the originals the distinction between the amount of upper and lower clouds is apparently not made. The weather is published as given. The rain-fall is measured at [illegible] a. m., local time.

AUSTRIAN SERIES.

Furnished by the cooperation of Professor Dr. Julius Hann, Director of the Imperial and Royal Central Meteorological Institute at Vienna.

Agram			29.61	752.0	48.9	9.4	40	SW			4		5			0	0		Prof. Ivan Stoxir.
Cracow, I. R. Observatory			29.22	742.3	37.(	2.8	89	WSW			5		10			0.043	1.1		Dr. Wierzbiski.
Eperies			29.41	747.0	33.4	0.8	80	S			5		10s		N	0	0		Julius Mikolik.
Gratz	28.28	718.3	29.54	750.2	44.2	6.8	55	S			2		5			0	0		Andreas Rospini.
Hermannstadt	28.20	716.2	29.64	752.8	40.8	4.6	35	WNW			4		3			0	0		Prof. Reissenberger.
Kremsmünster	28.09	713 5	29.43	747.6	43.5	6.4	71	W			6		10			0.059	1.5		Prof. C. Wagner.
Lemberg			29.30	744.3	34.4	1.2	87	SE			3		10			0.134	3.4		Dr. T. Stanecki.
Nyiregyhaza																			Habzsuda Daniel.
Pola			29.76	755.9	48.(	9.2	67	W			1		5ck			0	0		I.R.Hydrographic Of'ce
Szegedin			29.58	751.3	43.7	6.5	55	SW			3		8			0	0		Karl Stancol.
Trieste			29.78	756.5	49.1	9.5	75	W			1		5			0	0	Partly cl'dy	Prof. V. Farolfi.
Vienna			29.42	747.2	46.8	8.2	63	W			5		8			Inap.	Inap		I. k. Central Met. Obs'y.

NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 7 p. m., local time. The elevation of Gratz is 343.5 meters, or 1,126.9 feet; Hermannstadt, 407.8 meters, or 1,337.9 feet; Kremsmünster, 383.6 meters, or 1,258.5 feet.

BELGIAN SERIES.

Furnished by the cooperation of J. C. Houzeau, Director of the Royal Observatory at Brussels.

Arlon			29.52	740.7	43.0	6.6	81	SW			6		10			0.23	6 0		Royal Observatory.
Brussels			29.38	746.2	48.7	9.3	79	W			5		10s		W	0.116	2.95	Covered	
Furnes			29.39	746.4	49.8	9.9	82	WSW			6		6			0.008	0.2		
Maescyck			29.33	744.9	47.5	8.6	80	SW			8		10			0.46	11.8		

NOTE.—In the originals, the weather is occasionally given in general notes.

BRITISH SERIES

Furnished by the coöperation of Robert H. Scott, Esq., Director of the Meteorological Office, London, Alexander Buchan, Secretary of the Scottish Meteorological Society, Edinburgh, and the respective Observers.

STATIONS.	Barometer. Corrected for instrumental error and temperature. Inches.	Barometer. Corrected for instrumental error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Aberdeen			29.08	738.6	39.5	4.2		NW	32	14.3			3			0.090	2.29	Squally	William Boswell.
Ardrossan																			William McNeil.
Armagh, Observatory			29.40	746.7	44.1	6.7		WNW	10	4.5									S. Call, for Dr. Robinson.
Bidston (Liverpool Obs.)			29.33	745.0	46.1	7.8		W	41	18.3			10					Overcast	John Hartnup.
Birr Castle, (Parsonstown)			29.53	750.0	48.7	9.3		SW			5–6		10					Misty	J. Dreyer.
Bradford																0.10	2.5		J. McLandsborough.
Bridgetown, (Barbados)			30.00	762.0	83.8	28.8		NE			1		4					*D. clouds	Sergt. J. F. Halanen, A.
Cambridge, Observatory			29.36	745.7	48.0	8.9		WNW			3		5					Showery	H. Tedd. [H.C.
Cardington			29.40	746.7	48.0	8.9		W			2		9					Showery	John McLaren.
Carlisle																			T. Bell, for J. Cartmell.
Chatham, School M. E			29.48	748.8	54.2	12.3		W			4		6					Blue sky	Maj. C. N. Martin, R.E.
Dartmoor	28.22	716.8	29.74	755.4	43.0	6.1		NW			6		10					Squally	R. E. Power.
Davos Platz, (Switzerland)	24.58	624.3			35.0	1.7	73	Calm			0		10			0.103	2.62	Snowing	Francis Redford, M. A.
Donaghadee			29.35	745.5	44	6.7		NW			4		10					Raining	J. Mac Gowan.
Dover			29.41	747.0	53	11.7		W			4		9					Overcast	J. Costello.
Eccles, (near Manchester)			29.38	746.2	45.9	7.7		WNW	7.6	3.4			10					Showery	Thomas Mackereth.
Falmouth, Observatory			29.70	754.4	50.0	10.0		WNW			6		3					Squally	The Staff.
Fort Napier, (Natal)	27.43	696.7	29.66	753.4	88.2	31.2		N			1		8					*D. clouds	P'vt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.88	758.9	89	31.7		N			1		4					*D. clouds	
Galway, Queen's College			29.49	749.0	50	10.0		W			6		5					*D. clouds	Prof. A. H. Curtis.
Gibraltar, (Mediterranean)			30.08	764.0	64.0	17.8		NW			2		0					Blue sky	Corpl. C. Aitken, A.H.C.
Glasgow, Observatory			29.22	742.2	41.9	5.5		WNW			4		2					Blue sky	Lewis Stuart.
Great Yarmouth			29.26	743.2	47	8.3		WNW			6		4					Squally	G. T. Watson.
Greenwich, Royal Obs'y			29.43	747.5	52.5	11.4		W			5		6			Blank	Blank	*D. clouds	The Staff, for G. B. Airy.
Guernsey			29.70	754.4	50.5	10.3		WSW			6		10					Drizzling	Dr. S. E. Hoskins.
Helston			29.76	755.9	51	10.6		W			6		2c			0	0	*D. clouds	M. P. Moyle.
Holyhead			29.41	747.0	45	7.2		W			2		10					Raining	John Tilston.
Kew, Observatory			29.44	747.8	51.7	10.9		W	24	10.7			9k					Threatening	The Staff.
Kingstown			29.45	748.0	49	9.4		WNW			5		9					Raining	George Mitchell.
Leicester Museum			29.36	745.7	48.4	9.1		NW			6		10					Overcast	Wm. J. Harrison, F.G.S.
Malta, (Mediterranean)			30.02	762.5	57.4	14.1		NW			3		6k					*D. clouds	Corp'l. P. Bravis, A.H.C.
Nairn			29.09	738.9	39	3.9		WNW			5		8			Blank	Blank	¾ clouded	W. D. Penny.
Nassau, (Bahamas)			29.97	761.2	69.4	20.8		NW			1		9					Overcast	Surg. Maj. Henry.
Nottingham, Observatory			29.34	745.2	47.7	8.7		WNW			6		8k,d		W	0.022	0.56	*D. clouds	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			29.35	745.5	51.0	10.6		W			6		5					*D. clouds	Rev. Stephen Whitty.
Oxford, Radcliffe Obs'y			29.44	747.8	53	11.7		W			4		8					Overcast	J. Lucas.
Plymouth			29.68	753.9	50	10.0		WNW			3		10					Overcast	John Merrifield.
Roche's Point			29.67	753.6	50	10.0		NW			5		5					Cloudy	W. Kennedy.
Saint Ann's Head																			John C. Walker.
Saint Helier, (Jersey)			29.72	754.9	52.0	11.1		WNW			3		8					¾ clouded	A. P. Amy.
Sandwick Manse, (Orkneys)			29.15	740.4	37.9	3.3		NW	34	15.2			2					Showery	Rev. C. Clouston, LL. D.
Scarborough																			F. Shaw.
Scutari Cemetery, (Turkey)			29.81	757.2	54.0	12.2		SW			1		3					*D. clouds	Sergt. W. H. Lyne.
Sheffield			29.31	744.5	48.0	8.9		WNW			6		9			1.208	30.68	Raining	W. F. Cooper.
Silloth Rectory			29.27	743.4	49.4	9.7	56	NW			5		1			0	0	*D. clouds	Rev. Francis Redford
Stonyhurst, Observatory			29.34	745.2	42.0	5.6		W			4		10					Raining	Rev. S. J. Perry.
Stornoway, Lews C., (Hebr.)			29.16	740.7	39	3.9		N			4		5					*D. clouds	John Smith.
Stratfield Turgiss			29.47	748.5	50.5	10.3		W			2		10					Squally	Rev. Charles H. Griffith.
Thurso			29.07	738.4	40	4.4		NNW			6		7					*D. clouds	John Trotter.
Truro, Royal Institution			29.75	755.6	52	11.1		W			7		6					*D. clouds	W. Newcombe.
Valencia, Observatory			29.74	755.4	49.4	9.7		W	30	13.4			8					*D. clouds	The Staff.
SUB-SERIES.																			
Calf of Man, (Isle of Man)																			Henry Mercer.
Cape Good Hope, Obs'y			30.03	762.7	72.0	22.2	77	S	13	5.8		8	8						The Staff, for E. J. Stone.
Hobart Town, (Tasmania)			29.72	754.9	70.0	21.1	88	N			1		4k			0	0		Francis Abbott, F.R.A.S.
Leith, Restalrig Park			29.22	742.2	41.4	5.2		NW			3	4ck				0	0	Cloudy	Andrew Gibb.
Mauritius, Observatory			30.02	762.5	81.2	27.3	62	ESE	19.4	8.7		0	3		E	0	0	Fine	C. Meldrum.
Melbourne, Observatory			29.95	760.7	63.0	17.2	73	Calm	0	0			0			0	0	Very fine	R. L. J. Ellery.
Monach L't-house, (Hebrides)																			J. Youngclause.
North Unst, (Shetland Is.)																			Robert Burnet.

NOTE.—Generally, the originals do not give the relative humidity, rain-fall, or distinction between upper and lower clouds. The originals give the wind direction to 32 points and weather by the Beaufort notation. The originals give the barometer for Aberdeen, Cardington, Freetown, Galway, Oxford, St. Helier, Sandwick, Scarborough, Stonyhurst, Leith, Monach and North Unst as read off and the amount of cloudiness for Stornoway by the scale 0 to 4. The wind-force is given by the scale 0 to 12 in the official series; 0 to 6 in the sub-series; except in lbs. per square foot for Greenwich and Hobart Town. The rain-fall is measured at Aberdeen at 10 a. m.; Bradford, 9 a. m.; Hobart Town, 7:30 a. m.; Nottingham, 6 p. m.; Mauritius, 9 a. m., local time. The elevation of Dartmoor is 1,400 feet, or 426.7 meters; Davos Platz, 5,[illegible] feet, or 1,[illegible] meters; Fort Napier, 2,200 feet, or 670.6 meters. *Detached clouds.

By authority of the MINISTER OF FOREIGN AFFAIRS.

COSTA RICA SERIES.

Furnished by the coöperation of Senor Federico Maison, Director of the Central Office of Statistics and Meteorology.

San José																			

DANISH SERIES.

Furnished by the coöperation of Captain N. Hoffmeyer, Director of the Royal Danish Meteorological Institute at Copenhagen.

Copenhagen			28.74	730.0	37.0	2.8	86	W			2		10						
Fanöe			28.82	731.9	36.5	2.5	89	WSW			6		10					Rain & snow	
Godthaab, (Greenland)			29.95	760.8	21.9	— 5.6	98	S			6		10					Snowing	
Stykkisholm, (Iceland)			29.93	760.1	12.7	—10.7	90	NE			8		5						
Thorshavn, (Faröe)			29.23	742.5	35.2	1.8	66	N			5		3						
Vestervig			28.78	730.9	34.3	1.3	100	NW			2		10					Snowing	

NOTE.—The originals give the wind-force by the scale 0 to 6; occasionally, weather by Vienna symbols; no distinction between the amount of upper and lower clouds.

FRENCH SERIES.

Furnished by the co-operation of His Excellency, U. J. Le Verrier, Director of the Paris Observatory, and the respective Observers.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Upp'r. 0—10.	Clouds. Amount. Low'r. 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Alençon	.....	.....	29.74	755.5	44.6	7	89	WNW	.....	.....	3	.....	8kn	.....	WNW	0	0	Very cloudy	Normal School.
Amiens	.....	.....	29.55	750.6	47.1	8.4	95	W	.....	.....	3	.....	5	.....	W	0.039	1.0	Cloudy	Normal School.
Avignon	.....	.....	29.83	757.6	57.2	14	42	NW	.....	.....	2	.....	0	.....	.....	0	0	Clear	Normal School.
Bar-sur-Seine	.....	.....	29.69	754.1	48.6	9.2	77	SW	.....	.....	2	.....	10	.....	SW	0.260	6.6	Covered	C. Saillard.
Beaumette, (near Angers)	.....	.....	29.78	756.4	52.7	11.5	75	WSW	11.0	4.9	.....	.....	.....	.....	W	0.008	0.2	.....	Beaumette Observ'tory.
Beauvais	.....	.....	29.61	752.2	52.2	11.2	76	W	.....	.....	3	.....	8	.....	W	0.083	2.10	Very cloudy	Normal School.
Besançon	.....	.....	29.61	757.2	42.8	5.8	89	S	.....	.....	6	.....	10	.....	S	0.181	4.6	Covered	Normal School.
Bourg en Bresse	.....	.....	29.50	759.5	42.8	6	85	S	.....	.....	6	.....	10n	.....	N	0.012	0.3	Covered	Normal School.
Bourges	.....	.....	29.80	756.8	50.5	10.3	84	SSW	.....	.....	6	.....	10	.....	NW	0.134	3.4	Covered	Normal School.
Brest	.....	.....	29.79	756.6	52.3	11.3	85	WNW	.....	.....	5	.....	10	.....	WNW	0.059	1.50	Raining	Naval Observatory.
Carcassonne	.....	.....	29.92	760.0	49.3	9.6	92	W	.....	.....	1	.....	10	.....	E	0	0	Covered	Normal School.
Caen	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Chartres	.....	.....	29.69	754.0	50.2	10.1	81	W	.....	.....	2	.....	10	.....	SE	0.020	0.5	Covered	Normal School.
Châlons-sur-Marne	.....	.....	29.61	752.2	48.2	9.0	84	W	.....	.....	6	.....	10m	.....	E	0.083	2.1	Covered	Normal School.
Clermont	.....	.....	29.85	758.1	46.8	8.2	72	W	.....	.....	3	.....	8	.....	W	0	0	.....	Puy de Dome Obs'y.
Commercy	.....	.....	29.66	753.4	44.4	6.9	91	W	.....	.....	4	.....	8n	.....	W	0.402	10.2	Very cloudy	Normal School.
Commune de Gréasque*	.....	.....	29.83	757.6	53.4	11.9	40	NW	.....	.....	4	.....	2	.....	NW	0	0	.....	M. Kina.
Grenoble	.....	.....	29.89	759.3	43.0	6.1	73	ENE	.....	.....	1	.....	8kn	.....	NW	0	0	Very cloudy	Normal School.
La Roche-sur-Yon	.....	.....	30.00	762.1	52.5	11.4	86	NW	.....	.....	2	.....	10	.....	.....	0.055	1.4	Covered	Normal School.
Le Mans	.....	.....	29.77	756.1	50.5	10.3	97	W	.....	.....	4	.....	5	.....	W	0.020	0.5	Cloudy	Normal School.
Lons-Le-Saulnier	.....	.....	29.84	757.8	42.5	5.7	91	SW	.....	.....	2	.....	10	.....	.....	0	0	Covered	Normal School.
Lorient	.....	.....	29.85	758.3	55.0	12.8	90	WNW	.....	.....	3	.....	5	.....	NW	0.016	0.4	Cloudy	Naval Observatory.
Mâcon	.....	.....	29.81	757.2	40.6	4.8	79	SE	.....	.....	2	.....	5	.....	NW	0	0	Cloudy	Normal School.
Metz	.....	.....	29.63	752.5	43.3	6.3	95	SW	.....	.....	3	.....	10m	.....	.....	0.248	6.3	.....	M. Schuster.
Mirecourt	.....	.....	29.62	752.4	44.2	6.8	89	SW	.....	.....	4	.....	10	.....	NE	0.138	3.5	Covered	Normal School.
Nismes	.....	.....	29.85	758.3	50.4	10.2	52	NW	.....	.....	1	.....	..kn	.....	W	0	0	.....	Normal School.
Orleans	.....	.....	29.70	754.4	39.9	4.4	83	SSW	.....	.....	2	.....	10	.....	SSW	0.122	3.1	Covered	Normal School.
Paris, Observatory	.....	.....	29.64	752.8	50.7	10.4	78	W	.....	.....	2	.....	10k	.....	WNW	0.032	0 81	Covered	National Observatory.
Parthenay	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Privas	.....	.....	29.85	758.3	53.6	12	54	NW	.....	.....	2	.....	2	.....	NW	0	0	Slightly cl'dy	Normal School.
Rochefort, Observatory	.....	.....	29.94	760.4	54.7	12.6	86	WSW	.....	.....	2	.....	5	.....	N	0.055	1.5	½ covered	Naval Observatory.
Rouen	.....	.....	29.62	752.3	51.1	10.6	78	W	.....	.....	2	.....	10	.....	W	0.220	5.6	Covered	Normal School.
Saint Lo	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Tarbes	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Villefranche	28.95	735.4	30.06	763.4	46.4	8	91	W	.....	.....	4	.....	10	.....	.....	0.24	6.	Covered	Normal School.
	.....	.....	29.87	758.8	44.6	7	72	SE	.....	.....	2	.....	10	.....	.....	0	0	Covered	Normal School.
SUB-SERIES.																			
Fort de France, Martinique	.....	.....	29.94	760.4	78.8	26	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	L'Abbé Marchési.
Marseilles	.....	.....	29.82	757.3	55.2	12.9	64	NW	.....	.....	2	.....	1	.....	.....	0	0	Partly cl'dy.	Marseilles Observatory.
Mont-Louis	24.71	627.6	30.02	762.6	36.7	2.6	74	WNW	9.8	4.17	.....	.....	6	.....	WNW	0	0	.....	—. Falguère.
Montsouris, Paris	.....	.....	29.63	752.7	50.5	10.3	81	W	.....	.....	3	.....	10	.....	W	0.016	0.4	.....	Montsouris Observatory
Perpignan	.....	.....	29.91	759.8	53.8	12.1	66	NW	7.4	3.33	.....	.....	7	.....	NW	0	0	.....	Dr. Fines.
Pic du Midi, (Summit,) H. P.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. Baylac.
Pic du Midi, (Plantade,) H. P.	22.35	567.6	.....	.....	28.0	— 2.2	.....	N	.....	.....	1	.....	10	.....	.....	1.640	41.8	Snowy	General de Nansouty.
Saint Maur, (near Paris)	.....	.....	29.64	752.9	51.1	10.6	80	WSW	.....	.....	2	.....	10	.....	.....	0.031	0.8	Covered	E. Renou.
Toulouse	.....	.....	29.98	761.6	49.1	9.5	98	W	.....	.....	3	.....	10	.....	.....	0.016	0.4	.....	Toulouse Observatory.
Tours	.....	.....	29.77	756.2	53.2	11.8	69	WNW	.....	.....	3	.....	10	.....	NNW	0.024	0.6	.....	C. Marquet.
Versailles, (near Paris)	.....	.....	29.65	753.1	50.7	10.4	84	W	.....	.....	2	.....	10	.....	.....	0.027	0.69	Light rain	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai)	.....	.....	30.45	773.4	35.1	1.7	73	Calm	0	0	.....	.....	10	.....	W	0	0	.....	Marc Dechevrens, S. J.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—Generally, the originals give the wind-force *by the scale 0 to 7*; no distinction between upper and lower clouds is made, in the official series, the amount by the scale 0 to 4; the rain-fall as measured at 7, 8 or 9 a. m., local time; at Clermont, 9 a. m. of the following day; the weather in general terms as published. The elevation of Clermont is 388 meters, or 1,272.9 feet; Commune de Gréasque, 322 meters, or 1,056.4 feet; Tarbes, 308 meters, or 1,010 feet; Mont-Louis, 1,580.40 meters, or 5,204.8 feet; Pic du Midi, (Summit,) 2,877 meters, or 9,439.1 feet; Pic du Midi, Plantade,) 2,866 meters, or 7,762.6 feet. In correcting the Mont-Louis barometric observations for altitude, the constant 135. millimeters has been added. *Bouches-du-Rhône

GERMAN SERIES.

Furnished by the coöperation of Professor Dr. G. Neumayer, Director of the German Naval Observatory, Hamburg.

Bamberg	.....	.....	29.40	746.8	43.2	6.2	67	W	.....	.....	6	.....	9	W	.....	0.118	3.0	.....	Prof. T. Hoh.
Berlin	.....	.....	29.66	753.2	45.5	7.5	68	W	.....	.....	4	.....	7	.....	.....	0.472	12.0	.....	Prof. Arndt.
Breslau	.....	.....	29.15	740.4	41.5	5.3	73	WNW	.....	.....	6	.....	9	.....	.....	0	0	.....	Royal University Obs'y.
Carlsruhe	.....	.....	29.50	749.2	43.5	6.4	87	SW	.....	.....	10	.....	10	.....	.....	0.354	9.0	Raining	A. Senz.
Cassel	.....	.....	29.20	741.6	46.0	7.8	66	WNW	.....	.....	8	.....	10	NW	.....	0.220	5.6	.....	Dr. H. Möhl.
Crefeld	.....	.....	29.25	743.0	46.0	7.8	83	NW	.....	.....	6	.....	10	.....	.....	0.16	4.	.....	Director Lose.
Emden	.....	.....	29.06	738.1	38.8	3.8	98	WNW	.....	.....	5	.....	8	.....	.....	0.177	4.5	.....	Prof. Prestel.
Frankfort on the Main	.....	.....	29.45	747.9	46.2	7.9	73	SW	.....	.....	2	.....	10	.....	.....	0.165	4.2	.....	Physical Society.
Friedrichshafen	28.23	717.1	29.68	753.8	44.2	6.8	72	W	.....	.....	10	.....	10	.....	.....	0	0	Stormy	M. Wilhelm.
Hamburg	.....	.....	28.97	735.7	41.5	5.3	83	WSW	.....	.....	6	.....	10	.....	.....	0.268	7.2	Hail-squall	Captain F. Hegemann.
Kiel	.....	.....	28.84	732.5	42.6	5.9	90	W	.....	.....	7	.....	10	.....	.....	0.165	4.2	.....	Prof. G. Karsten.
Königsberg, (Prussia)	.....	.....	28.84	732.5	32.5	0.3	96	SW	.....	.....	5	.....	10	.....	.....	0.169	4.3	Snowing	Prof. E. Luther.
Köslin	.....	.....	28.91	734.2	39.0	3.8	.....	W	.....	.....	3	.....	10	.....	.....	0	0	.....	H. Müller.
Leipsic	.....	.....	29.20	741.6	40.8	4.9	89	SW	.....	.....	8	.....	10	W	.....	0.008	0.2	Raining	Prof. Bruhns.
Memel	.....	.....	28.84	732.0	33.1	0.6	98	S	.....	.....	5	.....	Fog	.....	.....	0.106	2.7	Snowing	Reinbrecht & Skalweit.
Münster	.....	.....	29.11	739.4	44.2	6.8	97	SW	.....	.....	6	.....	10	.....	.....	0.150	3.8	.....	Prof. E. Heis.
Neufahrwasser	.....	.....	28.87	733.2	39.6	4.2	80	WNW	.....	.....	4	.....	7	.....	.....	0.087	2.2	.....	A Lothe.
Posen	.....	.....	29.06	738.2	40.1	4.5	84	W	.....	.....	6	.....	9	.....	.....	0.390	9.9	.....	Dr. Magener.
Strassburg, (in Alsace)	.....	.....	29.60	751.7	47.5	8.6	70	WSW	.....	.....	5	.....	10	WSW	.....	0.039	1.0	.....	Dr. Schur.
Stuttgart	.....	.....	29.52	749.8	44.1	6.7	76	W	.....	.....	4	.....	10	.....	.....	0.161	4.1	.....	Prof. Schoder.
Thorn	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Dr. Hasenbalg.
Treves, (Trier)	.....	.....	29.38	746.3	46.9	8.3	75	W	.....	.....	7	.....	10	.....	.....	0.161	4.1	.....	Prof. Flesch.
Weissenburg, (Bavaria)	27.93	709.5	29.45	748.0	40.8	4.9	86	WSW	.....	.....	7	.....	10	.....	.....	0.268	6.8	Light rain	Dr. von Bebber.
Wustrow, Naval School	.....	.....	28.90	735.6	34.9	1.6	91	WNW	.....	.....	6	.....	10	.....	.....	0.031	0.8	.....	E. F. Schütz.
GERMAN NAVAL SERIES.																			
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—The elevation of Friedrichshafen is 413.4 meters, or 1,356.3 feet; Weissenburg, 431 meters, or 1,414.2 ft. In the originals the distinction between the amount of upper and lower clouds is not made. It is not always certain that the remarks in the weather column refer to the moment of observation.

GREEK SERIES.

Furnished by the coöperation of Professor Dr. J. F. Julius Schmidt, Director of the Royal Observatory at Athens.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Athens	.....	.....	29.85	758 2	55 2	12.8	.....	W	.....	.....	.....	... ...	....	.....	.....	.....	.....	Cloudy	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

NOTE.—The originals give the barometer corrected, but not reduced to sea-level; occasionally the kind of clouds; the weather as published. They omit the humidity, wind-force, amount of cloudiness and rain-fall.

INDIAN SERIES.

Furnished by the coöperation of H. F. Blanford, Meteorological Reporter to the Government of India.

Kurrachee	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Deesa	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Bombay	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Poona	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Lahore	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Belgaum	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Bangalore	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Rorkee	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Agra	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Trichinopoly	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Nagpur	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Madras	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Lucknow	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Allahabad	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Patna	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Hazaribagh	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cuttack	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Calcutta (Alipore)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Goalpara	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Chittagong	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Sibsagar	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Rangoon	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Jubbulpore	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
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ITALIAN SERIES.

Furnished by the cooperation of His Excellency the Min ster of Agriculture, Industry and Commerce, and the respective Observers.

Udine	.....	.....	29.73	755.2	41.5	5.3	63	Calm	0	0	.....	.....	10	.....	.....	0	0	.....	Prof. Giovanni Clodig.
Stelvio	21.75	552.5	.....	.....	21.7	— 5.7	.....	W	.....	.....	1	.....	10	.....	.....	0	0	Foggy	Signora Ernesta Manfredi.
Valdobbia	21.81	554.0	.....	.....	24.1	— 4.4	85	W	.....	.....	6	.....	7	NW	.....	0	0	.. ..	Ab. Dom. Mongini.
Padua	.....	.....	29.73	755.1	44.1	6.7	67	W	4.5	2.2	.....	.....	5	SW	.....	0	0	.....	Prof. Dott. Lorenzoni.
Vicenza	.....	.....	29.73	755.2	43.7	6.5	59	NE	1.8	0.8	.....	.....	8	W	.....	0	0	.....	Conte Alm. Da Schio.
Verona	.....	.....	29.76	755.8	48.6	9.2	61	E	.....	.....	2	.....	0	.....	.....	0	0	.....	Dott. B. Bertoncelli.
Bergamo	28.37	720.5	29.71	754.5	46.8	8.2	35	SW	.....	.....	6	.....	3	.....	.....	0	0	.....	Prof Trionfini Carlo.
Domodossola	.....	.....	29.72	755.0	46.4	8.0	31	S	.....	.....	6	.....	4	.....	.....	0	0	.....	Prof. Giuseppe Calza.
Milan	.....	.....	29.76	755.8	49.5	9.7	48	NW	.....	.....	1	.....	6	NNW	.....	0	0	.....	Ab. Gio. Capelli
Pavia	.....	.....	29.74	755.5	45.3	7.4	57	E	.....	.....	4	.....	5	.....	.....	0	0	.....	Prof. Gio. Cantoni.
Moncalieri	.....	.....	29.75	755.6	44.6	7.0	51	NNW	0.7	0.3	.....	.....	8	SW	.....	0	0	.....	Prof P. F. Denza.
Mondovi	27.81	706.3	29.75	755.6	42.8	6.0	44	NW	.....	.....	2	.....	2	N	.....	0	0	.....	Prof. D. C. Bruno.
Porto Maurizio	.....	.....	29.82	757.4	50.7	10.4	43	SW	.....	.....	6	.....	1	.....	.....	0	0	.....	Prof. L. Vassallo.
Genoa	.....	.....	29.79	756.6	53.1	11.7	41	SW	8.1	3.6	.....	.....	2	S	.....	0	0	.....	Prof. G. M. Garibaldi.
Piacenza	.....	.....	29.76	755.9	45.9	7.7	57	NW	3.1	1.4	.....	.....	3	NW	.....	0	0	.....	Dott. G. Manzi.
Parma	.....	.....	29.72	755.0	49.6	9.8	61	W	.....	.....	2	.....	2	.....	.....	0	0	.....	Prof. P. Pigorini.
Florence	.....	.....	29.83	757.7	48.7	9.3	63	SW	.....	.....	2	.....	5	W	.....	0	0	.....	Cav. F. Meucci.
Leghorn	.....	.....	29.82	757.4	51.3	10.7	69	SW	3.1	1.4	.....	.....	9	S	.....	0	0	.....	Prof. P. Monte.
Siena	28.58	726.0	29.82	757.3	47.3	8.5	66	SW	0	0	.....	.....	7	W	.....	0	0	.....	Prof. L. Toscani.
Urbino	28.23	717.0	29.82	757.5	43.5	6.4	61	SW	.....	.....	4	.....	0	.....	.....	0	0	.....	Prof. P. Serpieri.
Pesaro	.....	.....	29.78	756.5	48.9	9.4	64	SW	23.0	10.3	.....	.....	1	SW	.....	0	0	.....	Prof. Luigi Guidi.
Ancona	.....	.....	29.78	756.3	49.3	9.6	64	SE	.....	.....	4	.....	1	.....	.....	0	0	.....	Prof. F. De— Bosis.
Grosseto	.....	.....	29.84	757.9	52.5	11.3	59	SW	.....	.....	2	.....	4	NW	.....	0	0	.....	Avv. P. Ponticelli.
Rome	.....	.....	29.84	757.8	56.1	13.4	54	SE	4.3	1.9	.....	.....	3	SW	.....	0.200	0.5	.....	Prof's. P. Secchi & L. Respighi
Naples, O. U	.....	.....	29.85	758.2	58.5	14.6	60	S	.....	.....	2	.....	6	SW	.....	0	0	.....	Prof. L. Palmieri.
Lecce	.....	.....	29.87	758.8	54.7	12.6	59	NNW	12.5	5.6	.....	.....	4	.....	.....	0	0	.....	Prof. C. De—Giorgi.
Cosenza	.....	.....	29.88	758.9	53.2	11.8	75	SE	3.1	1.4	.....	.....	4	SW	.....	0.038	1.0	.....	Prof. F. D. Conti.
Cagliari	.....	.....	29.84	757.8	53.1	11.7	51	NW	.....	.....	4	.....	3	NW	.....	0.038	1.0	.....	Prof. A. Pacinotti.
Riposto, (Sicily)	.....	.....	29.78	756.4	58.6	14.8	64	E	.....	.....	2	.....	5	E	.....	0	0	.....	Prof. F. Caflero.
Palermo	.....	.....	29.79	756.7	55.6	12.8	61	NW	5.6	2.5	.....	.....	9	WNW	.....	0.07	1.8	Raining.....	Prof. G. Cacciatore.
Caltanissetta	27.91	709.0	29.90	759.5	45.0	7.2	77	NW	.....	.....	4	.....	10	NE	.....	0.21	5.4	Raining.....	Prof. A. Pagani.
Siracusa	.....	.....	29.80	756.9	56.7	13.7	68	E	.....	.....	4	.....	10	WNW	.....	0	0	.....	Prof. V. Giuliano.
SUB-SERIES.																			
Naples, S. R.	.....	.....	29.87	758.8	50.7	10.3	74	SE	0	0	.....	.....	7	E	.....	0.787	20.0	.....	Prof. F. Brioschi.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

NOTE.—The originals give the wind-force by the scale 0 to 4, or the velocity in kilometers per hour; generally, no distinction between upper and lower clouds; occasionally the weather by the Vienna symbols. The elevation of Stelvio is 2,543.0 meters, or 8,342.9 feet; Valdobbia, 2,548.0 meters or 8,359.3 feet; Bergamo, 379.6 meters, or 1,245 3 feet; Mondovi, 556 meters, or 1,824.2 feet; Siena, 348.5 meters, or 1,143.3 feet; Urbino, 451 meters, or 1,479.7 feet; Caltanissetta, 570.3 meters, or 1,871.0 feet.

JAPANESE SERIES.

Furnished by the coöperation of the Imperial University of Tokei, Japan.

Tokei	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Prof. P. V. Veeder.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

NOTE.—The originals give the amount of cloudiness by the scale 0 to 4 without distinguishing between upper and lower clouds. The rain-fall is measured at 7 a. m., local time.

By authority of the SECRETARY OF PUBLIC WORKS.

MEXICAN SERIES.

Furnished by the coöperation of Senor Mariano Barcena, Director of the Central Meteorological Observatory in the City of Mexico.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Mexico																			Mariano Barcena.
																			Vicente Reyes.
																			Miguel Perez. (Engineers in charge.)

NOTE.—The elevation of Mexico is 2,290 meters, or 7,512.9 feet. The rain-fall is measured at 6 a. m., local time.

NETHERLANDS' SERIES.

Furnished by the cooperation of Professor Buys Ballot, Director of the Royal Meteorological Institute of the Netherlands at Utrecht.

Flushing			29.36	745.8	47.3	8.5		W			6					0.138	3.5		
Groningen			29.00	736.6	40.3	4.6		NW								0.260	6.6		
Helder			29.13	739.9	45.3	7.4		W			6					0.398	10.1		
Utrecht			29.18	741.1	46.4	8.0	88	W			6		10			0.028	0.7	Overcast.	

NOTE.—The originals give the wind-pressure in kilograms per square meter; for Utrecht, they give the weather as published, from which the amount of cloudiness is taken by the scale 0 to 4, without distinguishing between upper and lower clouds. It is assumed that the barometer readings have been reduced to sea-level.

NORWEGIAN SERIES.

Furnished by the cooperation of Professor H. Mohn, Director of the Royal Norwegian Meteorological Institute at Christiania.

Bergen			28.67	728.1	36.7	2.6	82	S	6.0	2.7			10			0	0		
Brönö			28.97	735.7	20.7	— 6.3	82	E	13.4	6			5			0	0		
Christiania			28.76	730.4	21.4	— 5.9	74	NNE	9.6	4.3			10			0.213	5.4	Light snow.	
Tromsö			29.12	739.7	13.3	—10.4	57	SE	8.9	4			0			0	0		

NOTE.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols. The cloudiness and weather at Bergen refer to 2h., p. m., local time, instead of 1h., 4 min.

PORTUGUESE SERIES.

Furnished by the cooperation of J. C. de Brito Capello, Director of the Meteorological Observatory of the Infante Don Luiz at Lisbon.

Angra, (Azores)			30.37	771.3	56.3	13.5	73	SW	2.5	1.1			8			0	0		Dr. J. A. Sampaio.
Campo Major			30.11	764.7	58.1	14.5	48	SSW	3.8	1.7			1			0	0		Dr. A. M. R. dos Santos.
Funchal, (Madeira)			30.26	768.7	64.4	18.0	41	E	8.7	3.9			2			0	0		Capt. D. A. de Cunha.
Lisbon			30.18	766.5	54.0	12.2	71	N	7.4	3.3			10			0	0		The Observatory.
Ponta Delgada, (Azores)			30.40	772.1	59.0	15.0	72	ESE					8			0.08	0.7		

NOTE.—The originals give the wind-velocity in kilometers per hour, occasionally, the weather by the Vienna symbols; the amount of cloudiness without distinguishing between upper and lower clouds; the barometer corrected but not reduced to sea-level. The rain-fall at Libson is measured at noon, instead of 0 h. 6 m., p. m.

RUSSIAN SERIES.

Furnished by the cooperation of Professor H. Wild, Director of the Imperial Central Physical Observatory of Russia, at St. Petersburg.

Warsaw			29.63	737.3	33.1	0.6	98	SSW	22	10			10					Snowing	Astronomical Obs.
Wilna			29.02	737.2	28.8	— 1.8	85	S	34	15			10					Snowing	Astronomical Obs.
Dorpat			28.93	734.7	31.1	— 0.5	92	ESE	7	3			10					Light snow.	Physical Cabinet.
St. Petersburg			29.08	738.0	22.8	— 5.1	81	SSE	4	2			4						Central Physical Obs.
Kuoplo			29.03	737.4	20.5	— 6.4	100	ENE	7	3			10					Snowing	Ch. Forsten.
Kieff			29.48	748.9	29.8	— 1.2	73	SSW	13	6			4						Physical Cabinet.
Nikolaiev			29.70	754.4	36.1	2.3	59	SSE	13	6			10						Kurdakof
Kertch			29.78	756.4	41.2	5.1	83	SW	2	1			10					Raining	Lagorio.
Moscow			29.35	745.4	26.6	— 3.0	80	SSW	4	2			4						Meteorological Obs.
Lugan			29.56	750.7	33.1	0.6	75	W	22	10			5			blank	Blank		Meteorological Obs.
Archangel			29.19	741.4	10.9	—11.7	100	ESE	18	8			10						Ogorodnikof.
Tiflis	28.50	724.0	29.95	760.7	45.3	7.4	80	NW	9	4			10					Raining	Physical Observatory.
Astrakhan			29.86	758.5	42.6	5.9	78	SSW	2	1			8						Sebastianof.
Kasan			29.32	744.8	21.7	— 5.7	84	S	16	7			10						Physical Cabinet.
Orenburg			30.04	763.0	25.7	— 3.5	91	E	13	6			8						Tschernischef.
Ekaterinburg	28.89	733.8	29.87	758.8	28.2	— 2.1	57	SSE	4	2			8						Meteorogical Obs.
Nukuss			29.96	760.9	51.1	10.6	65	E	11	5			6						
Kasaly																			Bobrof.
Tashkend	28.51	724.1	30.24	768.1	50.5	10.3	72	Calm	0	0			10						Michelson.
Barnaul			30.35	770.8	8.8	—12.0	53	Calm	0	0			0						Meteorological Obs.
Yeniseisk			30.09	764.2	14.7	— 9.6	76	SW	2	1			10						Marks.
Irkutsk																			Usolzef.
Peking, (China)			30.22	767.5	30.2	4.0	32	WNW	9	4			0						Physical Observatory.
Nertchinsk																			Meteorological Obs.
Vladivostock																			
Nikolaievsk, on the Amoor																			

NOTE.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols; they omit the rain-fall. The elevation of Tiflis is 409 meters, or 1,341.8 feet; Ekaterinburg, 306.4? m., or 1,006.2? ft.; Tashkend, 494.2? m., or 1,621.3? ft.; Irkutsk, 392 m., or 1,286 ft.; Nertchinsk, 592.0? m., or 1,942.2? ft.

SPANISH SERIES.

Furnished by the cooperation of Antonio Aguilar, Director of the Royal Observatory at Madrid, and of Don Cecilio Pujazon, Captain R. N. Director of the Naval Observatory at San Fernando.

Madrid			30.07	763.6	53.8	12.1	49	SW	8.2	3.67		1	0	SW		0	0	Slightly cl'dy	Royal Observatory.
San Fernando			30.14	765.6	58.8	14.9	41	NNW	10.7	4.8		0	0			0	0		Naval Observatory.

NOTE.—The originals give the weather in general terms, as published; rain-fall for San Fernando from preceding to following midnight; wind-velocity for Madrid in kilometers per hour.

SWEDISH SERIES.

Furnished by the coöperation of Professor R. Rubenson, Director of the Royal Swedish Meteorological Institute, at Stockholm, and of Dr. H. H. Hildebrandsson, Chief of the Meteorological Division of the Upsala Observatory.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Haparanda			29.17	740.9	5.0	—15.0	91	N			2		10			0	0		
Umea																			
Hernosand			28.97	735.7	7.5	—13.6	96	NE			6		10			0.047	1.2	Snowing	
Stockholm			28.56	725.5	35.2	1.8	90	S			2		10			0.087	2.2		
Wisby			28.64	727.4	36.3	2.4	85	SW			6		5			0.126	3.6		
Sub-Series.																			
Upsala			28.58	725.9	25.2	— 3.8	95	NE	13.2	5.9			10			1.181?	30.00?	Snowing	Dr. Hildebrandsson.

Note.—The originals give the wind-force by the scale 0 to 6, and Upsala also velocity in meters per second; occasionally, the weather by the Vienna symbols, or in general terms; no distinction between the amount of upper and lower clouds. The rain-fall is measured at 8 a. m., local time.

SWISS SERIES.

Furnished by the coöperation of Professor R. Wolf, Director of the Observatory at Zurich, and of Professor E. Plantamour, Director of the Observatory at Geneva.

Geneva	28.41	721.7	29.87	758.7	44.4	6.9	74	WSW			2		10			0.028	0.7	Covered	The Observatory.
Zurich	28.07	713.0	29.75	755.6	42.8	6.0	69	W			6		10			0	0	Stormy	The Observatory.,

Note.—For Geneva the corresponding departures from the normal values are: Barometer, —4.0 mm; Thermometer, +1.9 cent.; Relative Humidity, +6 per cent.

Note.—The rain-fall is measured at Zurich at 7 a. m. on the following day. The originals give the barometer corrected but not reduced to sea-level; the wind-force by the scale 0 to 4 for Zurich; the amount of cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The elevation of Geneva is 408 meters, or 1,339 feet, and that of Zurich 470 meters, or 1,542 feet.

TURKISH SERIES.

Furnished by the cooperation of A. Coumbary, Effendi, Director of the Central Observatory at Constantinople, and of Professor C. V. A. Van Dyck, Superintendent of the Lee Observatory at Beirut.

Constantinople																			
Fao, (Persian Gulf)																			
Salonica																			
Valona																			
Varna																			
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y			30.00	761.9	71.4	21.9	60	SW			2		0			0	0	Blue sky	Prof. C. V. A. Van Dyck

Note.—The originals give the wind-force by the scale 0 to 7, (except Beirut, by the scale 0 to 12, and Constantinople velocity in meters per second;) the weather in general terms as published; no distinction between upper and lower clouds, and, except Constantinople and Beirut, the amount by the scale 0 to 4. It is assumed that the barometer is reduced to sea-level.

CANADIAN SERIES.

Furnished by the coöperation of Professor G. T. Kingston, Director of the Magnetic Observatory at Toronto, and Superintendent of the Meteorological Office of the Dominion of Canada, and the respective Observers. Those marked with a star (*) are also telegraphed daily to the office of the Chief Signal Officer, U. S. Army.

Bathurst, N. B																			Hon. J. Ferguson.
Brockville, Ontario			29.88	758.9	31	— 0.6		N	8	3.6			10s		N	0.03	0.8	Cloudy	W. R. Bigg.
*Chatham, N. B			29.69	754.1	29	— 1.7	97	N	11	4.9			10s		N	0.06	1.5	Light snow	G. A. Blair.
Charlottetown, P. E. Island			29.60	751.8	33	0.6	98	N	5	2.2			10n			0.050	1.27	Cloudy	H. J. Cundall, C. E.
Cornwall, Ontario			29.82	757.4	33.9	1.1	75	NE			1		10s			0.02	0.5	Dull	James Smith, M. A.
Dalhousie, N. B					30.9	— 0.6	92	W			1					0	0	Threatening	H. A. Johnson.
Esquimault, B. C			29.92	760.0	40.6	4.8	83	N				0	0			0	0	Clear	W. H. Bevis.
*Father Point, Quebec			29.91	759.7	27	— 2.8	99	NE	19	8.5			10n			0.26	6.6	Light snow	J. McWilliams.
Fredericton, N. B			29.70	754.4	31.0	— 0.6	89	NE	14	6.3			10s			0.015	0.38	Cloudy	Prof. Harrison.
*Fort Garry, Manitoba			30.56	776.2	15	— 9.4	91	E	7	3.1		5k	5n	SE	SE	0	0	Cloudy	James Stewart.
Goderich, Ontario			30.11	764.8	24.3	— 4.3	83	NW			2	3c	2s	NE		0	0	Fine	H. J. Strang, M. A.
Granton, Ontario	28.87	733.3	30.03	762.7	25.2	— 3.8		N			1	0	0			0	0	Clear	James Grant.
*Halifax, N. S			29.52	749.8	33	0.6	97	N	6	2.7			10n			0.26	6.60	Light rain	F. Allison, M. A.
Hamilton, Ontario			30.04	763.0	32.7	0.4	54	SW			1	5ck	0			0	0	Fair	G. Dickson.
Heart's Content, N. F			29.64	752.8	34	1.1	89	E			1		10			0	0	Overcast	E. Weedon.
*Kingston, Ontario			29.96	761.0	32	0.0	84	N	4	1.8			10s			Inap.	Inap.	Cloudy	S. Woods, M. A.
*Montreal, Quebec			29.83	757.7	30	— 1.1	87	NE	16	7.2			10n		NE	0.01	0.3	Cloudy	C. H. McLeod, C. E.
*Ottawa, Ontario			29.90	759.4	30	— 1.1	73	N	14	6.3			10ks		NE	0	0	Cloudy	J. B. Haney.
*Parry Sound, Ontario			30.10	764.5	16	— 8.9	80	N	16	7.2		2cs	0	NE		0	0	Fair	Rev. R. Mosley
Port Dover, Ontario			29.99	761.7	32	0.0	69	NW	7	3.1		10ck	0	NE		0	0	Fair	H. Morgan.
Port Hastings, N. S																			Peter Grant
Port Stanley, Ontario			30.00	762.0	30	— 1.1	70	NW	8	3.6		5ck	0	NE		0	0	Fair	M. Payne.
*Quebec, Quebec			29.85	758.2	29	— 1.7	95	NE	18	8.0			10n		NE	0	0	Cloudy	Capt. Ashe, R. N.
*Rockliffe, Ontario			30.09	764.3	17	— 8.3	83	NW	8	3.6			10s		SE	0	0	Cloudy	
St. John, N. B			29.61	752.1	30	— 1.1	89	NE	16	7.2			10n			0.14	3.6	Light snow	G. Murdoch, C. E.
*Saugeen, Ontario			30.09	764.3	20	— 6.7	77	NE	7	3.1		2cs	2ks	N		0	0	Fair	K. Stewart.
Stayner, Ontario																			R. J. Cole.
Stratford, Ontario	28.71	729.2	30.06	763.5	23.0	— 5.0	66	NW	11	4.9		3cs	0			0	0	Fine	C. J. MacGregor, M. A.
*Sydney, C. B			29.61	752.1	33	0.6	95	N	3	1.3			10n			0	0	Foggy	T. C. Hill.
*Toronto, Ontario			30.00	762.0	29	— 1.7	61	NW	13	5.8		2cs	0	W		0	0	Fair	Magnetic Observatory.
Woodstock, Ontario			30.03	762.7	27.1	— 2.7	91	W	15	6.7			7k			0	0	Cloudy	J. Montgomery.
Sub-Series.																			
St. Johns, Newfoundland			29.75	755.6	34.5	1.4	100	NE					10			0.20	5.1	Foggy	John Delany

Note.—The originals for Brockville, Charlottetown, Port Dover, Port Stanley, Stayner, St. Johns, N. F. and those telegraphed, give the amount of cloudiness by the scale 0 to 4. The elevation of Granton is 1,615 feet, or 809.4 m.; Stratford, 1,182 feet, or 360.3 m

UNITED STATES SERIES.

Furnished by the cooperation of Bvt. Brig. Gen. Albert J. Myer, Chief Signal Officer, U. S. Army.

STATIONS.	BAROMETER. Corrected for instrum'tal error and temperature. Inches.	BAROMETER. Corrected for instrum'tal error and temperature. Millimeters.	BAROMETER. Reduced to sea-level. Inches.	BAROMETER. Reduced to sea-level. Millimeters.	TEMPERATURE OF THE AIR. Fahrenheit.	TEMPERATURE OF THE AIR. Centigrade.	RELATIVE HUMIDITY. Per cent.	WIND. Direction. From—	WIND. Velocity. Miles per hour.	WIND. Velocity. Meters per second.	WIND. Force. 0—10.	CLOUDS. Amount. Upper. 0—10.	CLOUDS. Amount. Low'r. 0—10.	CLOUDS. Direction. Upper. From—	CLOUDS. Direction. Lower. From—	RAIN-FALL OR MELTED SNOW IN THE PAST 24 HOURS. Inches.	RAIN-FALL OR MELTED SNOW IN THE PAST 24 HOURS. Millimeters.	WEATHER	OBSERVER.
Albany, N. Y.	.....	.....	29.66	753.4	30	— 1.1	100	NW	5	2.2	.....	.....	10n	.....	.....	0.16	4.1	Heavy snow	
Alpena, Mich.	.....	.....	30.20	767.1	24	— 4.4	74	N	7	3.1	.....	0	0	.....	.....	0	0	Fair	
Atlantic City, N. J.	.....	.....	29.70	754.4	36	2.2	90	SW	9	4.0	.....	6ck	2s	NW	.....	0.06	1.5	Clearing	
Augusta, Ga.	.....	.....	30.10	764.5	39	3.9	82	NE	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Baltimore, Md.	.....	.....	29.78	756.4	39	3.9	81	NW	6	2.7	.....	2cs	5s	NW	NW	0.05	1.3	Fair	
Barnegat, N. J.	.....	.....	29.67	753.6	36	2.2	90	NW	16	7.2	.....	5k	5s	NW	N	0.18	4.6	Fair	
Bismarck, Dakota	28.53	724.6	30.34	770.6	14	—10.0	64	NE	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Boston, Mass.	.....	.....	29.55	750.6	32	0.0	100	N	12	5.4	.....	.....	10n	.....	N	0.33	8.4	Light snow	
Breckenridge, Minn.	.....	.....	30.44	773.2	15	— 9.4	83	NE	8	3.6	.....	.....	10s	.....	NW	0	0	Cloudy	
Buffalo, N. Y.	.....	.....	29.92	760.0	32.0	0.0	79	N	6	2.7	.....	5k	5s	N	N	0.03	0.8	Cloudy	
Burlington, Vt.	.....	.....	29.75	755.6	30	— 1.1	78	N	12	5.4	.....	.....	10s	.....	.....	0.08	2.0	Cloudy	
Cairo, Ill.	.....	.....	30.30	769.6	32	0.0	79	N	8	3.6	.....	.....	10s	.....	.....	0	0	Cloudy	
Cape Hatteras, N. C.	.....	.....	29.81	757.2	44	6.7	60	NW	16	7.2	.....	0	Haz.	.....	.....	0	0	Clear	
Cape Henry, Va.	.....	.....	29.80	756.9	42	5.6	74	NW	16	7.2	.....	5k	5s	NW	.....	0.03	0.8	Cloudy	
Cape Lookout, N. C.	.....	.....	29.93	760.2	44	6.7	75	NW	24	10.7	.....	0	0	.....	.....	0	0	Clear	
Cape May, N. J.	.....	.....	29.72	754.9	37	2.8	90	NW	24	10.7	.....	.....	10s	.....	NW	0.04	1.0	Cloudy	
Charleston, S. C.	.....	.....	30.06	763.5	42	5.6	74	W	7	3.1	.....	0	Haz	.....	.....	0	0	Clear	
Cheyenne, Wyoming	23.99	609.3	29.93	760.2	26	— 3.3	77	NW	4	1.8	.....	0	1s	.....	.....	0	0	Clear	
Chicago, Ill.	.....	.....	30.20	767.1	29	— 1.7	77	NW	7	3.1	.....	.....	10s	.....	.....	Inap.	Inap.	Cloudy	
Cincinnati, Ohio	.....	.....	30.11	764 8	35	1.7	80	NW	8	3.6	.....	.....	10s	.....	.....	Inap.	Inap.	Cloudy	
Cleveland, Ohio	.....	.....	30.06	763.5	31.5	— 0.3	84	W	10	4.5	.....	0	5s	.....	NW	0.01	0.3	Fair	
Corsicana, Tex.	.....	.....	30.16	766.1	42	5.6	74	NE	4	1.8	.....	.....	10s	.....	.....	0	0	Cloudy	
Davenport, Iowa	.....	.....	30.34	770.6	20	— 6.7	85	N	11	4.9	.....	5ck	0	.....	.....	0	0	Fair	
Denison, Tex.	.....	.....	30.22	767.6	38	3.3	80	E	3	1.3	.....	5cs	5s	E	.....	0	0	Cloudy	
Denver, Col.	24.80	629.9	30.02	762.5	29	— 1.7	89	N	5	2.2	.....	.....	10s	.....	.....	0	0	Cloudy	
Detroit, Mich.	.....	.....	30.06	763.5	30	— 1.1	68	N	4	1.8	.....	1c	0	.....	.....	0	0	Clear	
Dodge City, Kan.	27.50	698.5	29.88	758.9	33	0.6	90	SE	14	6.3	.....	.....	10s	.....	SE	0	0	Cloudy	
Dubuque, Iowa	.....	.....	30.33	770.4	24	— 4.4	87	Calm	0	0	.....	5k	0	NW	.....	0	0	Fair	
Duluth, Minn.	.....	.....	30.43	772.9	27	— 2.8	77	NE	8	3.6	.....	.....	10s	.....	.....	0	0	Cloudy	
Eastport, Me.	.....	.....	29.57	751.1	31	— 0.6	100	NE	19	8.5	.....	.....	10n	.....	.....	0.12	3.0	Light snow	
Erie, Pa.	.....	.....	29.95	760.7	34	1.1	79	W	6	2.7	.....	.....	10ks	.....	NW	0.02	0.5	Cloudy	
Escanaba, Mich.	.....	.....	30.32	770.1	21	— 6.1	85	N	27	12.1	.....	.....	10s	.....	N	0	0	Cloudy	
Fort Gibson, Indian Ter.	.....	.....	30.22	767.6	30	— 1.1	89	E	4	1.8	.....	5cs	2s	W	.....	0	0	Fair	
Ft. St. Michael, Alaska	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Fort Sill, Indian Ter.	28.98	736.1	30.13	765.3	40	4.4	63	E	8	3.6	.....	2k	2s	NE	.....	0	0	Fair	
Fort Sully, Dakota	28.62	726.9	30.42	772.7	21	— 6.1	85	SE	1	0.4	.....	2k	0	SE	.....	0	0	Fair	
Florence, Arizona	28.26	717.8	29.74	755.4	60	15.6	.....	E	.....	.....	.....	.....	10s	.....	E	0	0	Cloudy	
Galveston, Tex.	.....	.....	30.13	765.3	52	11.1	86	NE	8	3.6	.....	5ck	0	W	.....	0	0	Fair	
Grand Haven, Mich.	.....	.....	30.15	765.8	29	— 1.7	84	NE	6	2.7	.....	4c	4s	.....	.....	0	0	Cloudy	
Indianapolis, Ind.	.....	.....	30.20	767.1	30	— 1.1	89	NW	5	2.2	.....	.....	10s	.....	.....	0.02	0.5	Threatening	
Indianola, Tex.	.....	.....	30.10	764.5	56	13.3	80	E	11	4.9	.....	10cs	0	.....	.....	0	0	Cloudy	
Jacksonville, Fla.	.....	.....	30.14	765.5	45	7.2	68	NW	4	1.8	.....	5k	0	W	.....	0	0	Fair	
Keokuk, Iowa	.....	.....	30.26	768.6	29	— 1.7	89	N	8	3.6	.....	.....	10s	.....	N	0	0	Cloudy	
Key West, Fla.	.....	.....	30.03	762.7	62	16.7	88	NE	12	5.4	.....	.....	10ks	.....	.....	0.05	1.3	Cloudy	
Kittyhawk, N. C.	.....	.....	29.86	758.4	41	5.0	65	W	18	8.0	.....	0	2s	.....	.....	0	0	Fair	
Knoxville, Tenn.	.....	.....	30.19	766.8	34	1.1	69	NW	6	2.7	.....	.....	8ks	.....	W	0	0	Cloudy	
La Crosse, Wis.	.....	.....	30.33	770.4	25	— 3.9	75	N	4	1.8	.....	Haze	Haz	.....	.....	0	0	Hazy	
Leavenworth, Kan.	.....	.....	30.32	770.1	26	— 3.3	88	N	5	2.2	.....	0	0	.....	.....	0	0	Clear	
Louisville, Ky.	.....	.....	30.22	767.6	31	— 0.6	79	NW	10	4.5	.....	.....	10s	.....	NW	0	0	Cloudy	
Lynchburg, Va.	.....	.....	29.89	759.2	41	5.0	52	W	7	3.1	.....	0	0	.....	.....	0	0	Clear	
Malone, N. Y.	.....	.....	29.81	757.2	29	— 1.7	100	NE	4	1.8	.....	.....	10n	.....	NE	0.32	8.1	Light snow	
Marquette, Mich.	.....	.....	30.32	770.1	22	— 5.6	72	NW	6	2.7	.....	.....	10s	.....	.....	0	0	Cloudy	
Memphis, Tenn.	.....	.....	30.28	769.1	32	0.0	89	N	4	1.8	.....	.....	Fog	.....	.....	0	0	Foggy	
Milwaukee, Wis.	.....	.....	30.26	768.6	25	— 3.9	88	N	11	4.9	.....	.....	10s	.....	.....	Inap.	Inap.	Cloudy	
Mobile Ala.	.....	.....	30.20	767.1	42	5.6	83	N	8	3.6	.....	10k	0	W	.....	0	0	Cloudy	
Montgomery, Ala.	.....	.....	30.21	767.3	38	3.3	80	N	3	1.3	.....	8c	Haz	W	.....	0	0	Fair	
Morgantown, W. Va.	28.02	734.6	30.01	762.2	35	1.7	85	W	11	4.9	.....	.....	10s	.....	W	0.47	11.9	Cloudy	
Mt. Washington, N. H.	23.27	591.0	29.63	752.6	21	— 6.1	100	NE	24	10.7	.....	.....	Fog	.....	.....	0.02	0.5	Foggy	
Nashville, Tenn.	.....	.....	30.25	768.3	33	0.6	79	NW	5	2.2	.....	.....	10s	.....	NW	Inap.	Inap.	Cloudy	
New Haven, Conn.	.....	.....	29.65	752.6	36	2.2	90	N	10	4.5	.....	.....	10n	.....	.....	0.40	10.2	Light snow	
New London, Conn.	.....	.....	29.67	753.1	36	2.2	80	NW	6	2.7	.....	.....	10n	.....	N	0.66	16.8	Light snow	
New Orleans, La.	.....	.....	30.16	766.1	48	8.9	70	NE	11	4.9	.....	9k	0	W	.....	0	0	Cloudy	
Newport, R. I.	.....	.....	29.83	760.0	34	1.1	90	NW	12	5.4	.....	.....	10n	.....	N	0.89	22.6	Light snow	
New York, N. Y.	.....	.....	29.68	753.9	35	1.7	87	NW	7	3.1	.....	.....	10n	.....	NW	0.37	9.4	Sleeting	
Norfolk, Va.	.....	.....	29.85	758.2	42	5.6	58	W	5	2.2	.....	10k	0	NW	.....	Inap.	Inap.	Cloudy	
North Platte, Neb.	27.24	691.9	29.95	760.7	27	— 2.8	88	E	8	3.6	.....	.....	10s	.....	E	0	0	Cloudy	
Omaha, Neb.	29.18	741.2	30.33	770.4	28	— 2.2	67	N	6	2.7	.....	.....	10s	.....	.....	0	0	Cloudy	
Oswego, N. Y.	.....	.....	29.86	758.4	32.5	0.3	84	N	12	5.4	.....	.....	10s	.....	N	0.04	1.0	Cloudy	
Pembina, Dakota	.....	.....	30.52	775.2	15	— 9.4	91	Calm	0	0	.....	.....	10s	.....	.....	0	0	Cloudy	
Philadelphia, Pa.	.....	.....	29.72	754.9	36	2.2	90	N	14	6.3	.....	.....	8s,n	.....	N	0.12	3.0	Light rain	
Pike's Peak, Col.	17.56	446.0	29.77	756.1	8	—13.3	100	E	12	5.4	.....	10s	0	.....	.....	0.08	2.0	Cloudy	
Pittsburgh, Pa.	.....	.....	29.96	761.0	34	1.1	90	NW	9	4.0	.....	.....	10s	.....	NW	0.33	8.4	Cloudy	
Port Huron, Mich.	.....	.....	30.05	763.3	29	— 1.7	73	N	18	8.0	.....	6c	0	.....	.....	0	0	Fair	
Portland, Me.	.....	.....	29.54	750.3	33	0.6	89	NE	.....	.....	.....	.....	10n	.....	.....	0.41	10.4	Light snow	
Portland, Oregon	.....	.....	29.86	758.4	41	5.0	91	N	4	1.8	.....	.....	10s	.....	.....	0.08	2.0	Cloudy	
Punta Rassa, Fla.	.....	.....	30.10	764.5	56.0	13.3	65	NE	14	6.3	.....	2ck	5s	SW	W	Inap.	Inap.	Fair	
Rochester, N. Y.	.....	.....	29.88	758.9	32	0.0	89	N	8	3.6	.....	.....	10s	.....	.....	0.24	6.1	Cloudy	
Salt Lake City, Utah.	25.40	645.2	29.78	756.1	38	3.3	71	E	3	1.3	.....	.....	10s	.....	.....	0	0	Cloudy	
Sandy Hook, N. J.	.....	.....	29.67	753.6	36	2.2	90	NW	14	6.3	.....	.....	10n	.....	.....	0.50	12.7	Light rain	
San Diego, Cal.	.....	.....	29.81	757.2	57	13.9	87	W	4	1.8	.....	0	8s	.....	W	Inap.	Inap.	Cloudy	
San Francisco, Cal.	.....	.....	29.84	757.9	50	10.0	78	NW	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Santa Fé, N. M.	23 10	586.7	29.64	752.8	34	1.1	90	S	4	1.8	.....	.....	10s	.....	.....	0.41	10.4	Cloudy	
Savannah, Ga.	.....	.....	30.09	764.3	43	6.1	75	NW	6	2.7	.....	1cs	Sm'k	W	.....	0	0	Smoky	
Shreveport, La.	.....	.....	30.28	769.1	39	3.9	82	E	2	0.9	.....	1c	0	.....	.....	0	0	Clear	
Smithville, N. C.	.....	.....	29.99	761.7	41	5.0	75	W	5	2.2	.....	0	0	.....	.....	0	0	Clear	
Springfield, Mass.	.....	.....	29.61	752.1	38	3.3	90	N	4	1.8	.....	.....	10s	.....	.....	0.30	7.6	Cloudy	
St. Louis, Mo.	.....	.....	30.32	770.1	29	— 1.7	77	N	8	3.6	.....	.....	10s	.....	.....	0	0	Cloudy	
St. Marks, Fla.	.....	.....	30.14	765.5	42	5.6	91	Calm	0	0	.....	0	2s	.....	.....	0	0	Clear	
St. Paul, Minn.	.....	.....	30.34	770.6	25	— 3.9	88	N	4	1.8	.....	.....	10s	.....	.....	0	0	Cloudy	
St. Paul's Island, Alaska	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Thatcher's Island, Mass.	.....	.....	29.53	750.0	33	0.6	89	N	32	14.3	.....	.....	.....	.....	.....	0.82	20.8	Heavy snow	
Toledo, Ohio.	.....	.....	30.09	764.3	33	0.6	79	N	8	3.6	.....	.....	.....	.....	.....	0.04	1.0	Clear	
Tucson, Arizona	27.41	696.2	29.86	758.4	45	7.2	.....	SE	.....	.....	.....	2c	0	.....	.....	0	0	Cloudy	
Tybee Island, Ga.	.....	.....	30.06	763.5	43	6.1	75	NW	16	7.2	.....	.....	10s	.....	.....	0	0	Fair	
Vicksburg, Miss.	.....	.....	30.28	769.1	35	1.7	95	Calm	0	0	.....	2c	Haze	W	.....	0	0	Fair	
Virginia City, M. T.	24.18	614.2	29.66	753.4	23	— 5.0	86	Calm	0	0	.....	5cs	Fog	W	.....	0	0	Fair	
Washington, D. C.	.....	.....	29.81	757.2	39.5	4.2	76	NW	15	6.7	.....	.....	10n	.....	.....	Inap.	Inap.	Light snow	
Wilmington, N. C.	.....	.....	29.98	761.5	40	4.4	70	NW	10	4.5	.....	10k	0	NW	.....	0.10	2.5	Cloudy	
	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0	Haze	.....	.....	0	0	Clear	

UNITED STATES SERIES.—CONTINUED.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Wood's Holl, Mass.	.....	.....	29.49	749.0	34	1.1	90	NW	12	5.4	.....	.....	10n	.....	.....	1.63	41.4	Lightsnow.	
Yankton, Dakota	29.03	737 3	30.44	773.2	17	— 8.3	75	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Yuma, Arizona	.....	.....	29.75	755.6	62	16.7	.....	E	.....	.....	.....	2cs	0	E	.....	0	0	Fair	
Sub-Series.																			
Kingston, Jamaica, W. I.	.....	.....	30.19	766.8	78	25.6	78	SE	13	5.8	.....	5c	2s	SE	.....	0	0	.....	James Gall.
Navassa, W. I.	.....	.....	.....	.....	78	25.6	.....	E	.....	.....	3	.....	.....	.....	.....	Inap.	Inap.	.....	Dr. G. H. Davison.
Clifton, Ja., W. I.	27.20	690.9	30.00	762.0	65	18.3	78	E	1.9	0.4	.....	2c	0	E	.....	0	0	Fine	C. Partridge.
Paramaribo, D. Guiana, S.A	.....	.....	30.04	763.0	81	27.2	83	E	.....	.....	2	5k	5k	E	.....	0	0	Fair	C. J. Hering.
Batavia, Dutch Guiana, S.A.	30.08	764.0	.....	.....	78.8	26	.....	E	.....	.....	.....	.....	.....	.....	.....	0	0	Cloudy	Dr. H. Groot.
Medellin, Colombia, S. A.	25.26	641.6	.....	.....	68.0	20.0	79	Calm	.....	.....	0	2k	0	.....	.....	0	0	Fair	Thomas Herran.
York Factory, B. A.	.....	.....	30.71	780.0	1 0	—17.2	86	S	1	0.4	.....	1c	0	S	.....	0	0	Fair	J. Fortescue, W. Wood
Honolulu, Oahu, H. I.	.....	.....	30.04	763.0	68	20.0	95	E	.....	.....	1	.....	.....	.....	.....	0	0	Clear	Daniel Smith.
Makawao, Maui, H. I.	.....	.....	29.89	759.2	63	17.2	58	Calm	.....	.....	0	0	0	.....	.....	0	0	.....	F. L. Clarke

NOTE.—The originals give the amount of cloudiness by the scale 0 to 4, except York Factory, Makawao, Medellin and Paramaribo. The elevation of the barometer at Bismarck is 1,677 feet, or 511.1 meters; Cheyenne, 6,057.3 ft., or 1,846.2 m.; Clifton, about 2,892 ft., or 881.5 m.; Denver, 5,135 ft., or 1,565.2 m.; Dodge City, 2486ft., or 757.5 m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Florence, 1,550 (?) ft., or 472.5 (?) m.; Makawao, 6,205 ft., or 672.1 m.; Morgantown, 1,027.9 ft., or 313.3 m.; Medellin, 4,876 ft., or 1,486.2 m.; Mt. Washington, 6,285 ft., or 1,915.6 m.; North Platte, 2,846 ft., or 867.4 m.; Omaha, 1,054.6 ft., or 321.4 m.; Pike's Peak, 14,150.7 ft., or 4,313.1 m.; Salt Lake City, 4,862.2 ft., or 1,329.6 m.; Santa Fé, 6,862.2 (?) ft., or 2,091.6 (?) m.; Tucson, 2,545 (?) ft., or 775.7 (?) m.; Virginia City, 5,480 (?) ft., or 1,670.3 (?) m.; Yankton, 1,278 ft., or 389.5 m. The following constants are added in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Denver, 5.22 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fé, 6.54 in.; Tucson, 2.59 in.; Virginia City, 5.48 in. The elevation of Batavia is about feet; the barometric readings need the addition of 0.2 mm. or 0.01 in. for reduction to sea-level.

UNITED STATES NAVAL SERIES.

By authority of the **SECRETARY OF THE NAVY.**

Furnished by the coöperation of the Navy Department, through Commodore Daniel Ammen, U. S. N., Chief of Bureau of Navigation.

STATIONS AND VESSELS.	True course toward—	Hourly rate in knots.	*Barometer as reported.		Temperature of the Air.		Relative Humidity.	Wind.				Clouds.				Rain-fall or melted snow in the past 24 hours.		State of Ocean.	Direction of swell from—	Weather.	Observer.
								Direction.	Velocity		Force.	Amount.		Direction.							
												Up'er	Low'r	Up'er	Low'r						
			Inches.	Millimeters.	Fahrenheit.	Centigrade.	Per cent.	From—	Miles per hour.	Meters per second.	0—10.	0—10.	0—10.	From—	From—	Inches.	Millimeters.				
Naval Academy, Annapolis, Md.			29.41	747.0	39	3.9	91	NW			3		8			0	0			Cloudy	
Naval Hospital, Annapolis, Md.			29.81	757.2	38	3.3	81	NW			2		7		N	0	0			Cloudy	
Navy Yard, Mare Island, Cal.			29.92	760.0	49	9.4		NW			1		3			0	0			Fair	
Navy Yard, Norfolk, Va.			29.96†	761.0†	40	4.4	64	NW	6	2.7			9k			0	0			Hazy	
Navy Yard, Pensacola, Fla.			30.20	767.1	44	6.7	84	N	4	1.8			9		E	0	0			‡D. clouds	
Navy Yard, Portsmouth, N.H.			29.54	750.3	32	0.0		NE	12	5.4			10			§4.0	§10.1			Snowing	
¶ Canonicus, New Orleans, La.			30.11	764.8	47	8.3	92	NE			3		8		E					Cloudy	
Colorado, New York, N. Y.			29.71	754.6	37	2.8		NW	8	3.6			10		S&E	0.34	8.6			Raining	
Essex, Vera Cruz, Mex.			29.92	760.0	70	21.1	95	WSW			2		6		E			Smooth	NNW	‡D. clouds	
¶ Gettysburg, Oneglia, Italy.			29.79	756.7	54	12.2		SW			5		1					Moderate.	SSW	‡D. clouds	
Hartford, Hampton Roads, Va.			29.90	759.4	43	6.1		WNW			2		10		S	0	0			Overcast	
Huron, Charleston, S. C.			30.10	764.5	46	7.8	77	W			2		0							Hazy	
Lackawana, Mare Island, Cal.			29.98	761.5	60	10.0	93	NNW			1		4		SE			Smooth		‡D. clouds	
Marion, Port Said, Egypt			30.00	762.0	70	21.1	90	NNW			2		3		S			Smooth		‡D. clouds	
Michigan, Erie, Pa.			29.48	748.8	36	2.2	80	NW			1		10		NW					Cloudy	
Monongahela, Baltimore, Md.			29.79	756.7	41	5.0		NW			1		..ck			Blank	Blank			‡D. clouds	
New Hampshire, Port Royal, S. C.			30.20	767.1	45	7.2		NE			2		0							Hazy	
Omaha, Panama.			30.07	763.8	75	23.9	93	N			1		1			0	0	Smooth		Bright	
Ossipee, Pensacola, Fla.			30.19	766.8	48	8.9		N			2		8							‡D. clouds	
Pensacola, Panama.			30.05	763.3	76	24.4	95	NNW			1		2			0	0			Pleasant	
Plymouth, New Orleans, La.			30.14	765.5	48	8.9	85	NE			2		10		N					Cloudy	
Ranger, Hampton Roads, Va.			29.99	761.7	43	6.1		WNW			4		4		S&E			Moderate.	ESE	Hazy	
Richmond, Montevideo, Uruguay.			30.05	763.3	69.6	20.9	95	NW			2		4							Blue sky	
¶ Rio Bravo, Matamoras, Mex.			29.91	759.7	55	12.8		NE			1		8		SW					‡D. clouds	
Santee, Annapolis, Md.			29.84	757.9	42	5.6	74	NW			3		8							Cloudy	
St. Louis, League Island, Pa.			29.64	752.8	38	3.3		NW	8	3.6			8		S	0.39	9.9			Cloudy	
Vandalia, Constantinople, Turkey.			29.88	758.9	56	13.3	94	SW			1		3		NE					‡D. clouds	
Wabash, Boston, Mass.			29.57	751.1	34	1.1		N	11	4.9						0.8	20.3			Snowing	
Wyoming, Washington, D. C.			30.02†	762.5†	41	5.0		NW			3		9		NW						

* It is not known that the barometer is corrected for temperature, instrumental error or elevation. † Aneroid Barometer. ‡ Detached clouds. ¶ Barometer corrected for instrumental error and reduced to sea-level. § Unmelted snow?

UNITED STATES MARINE SERIES

REPORTED TO THE OFFICE OF THE CHIEF SIGNAL OFFICER OF THE ARMY.

NAMES OF VESSELS.	True course toward—	Hourly rate in knots.	Barometer reduced to sea-level.		Temperature of the Air.		Relative Humidity.	Wind.				Clouds.				State of Ocean.	Direction of swell from—	Weather.	Observer
								Direction.	Velocity.		Force.	Amount.		Direction.					
												Up'er	Low'r	Upper.	Lower.				
			Inches.	Millimeters.	Fahrenheit.	Centigrade.	Per cent.	From—	Miles per hour.	Meters per second.	0—10.	0—10.	0—10.	From—	From—				
PACIFIC MAIL S. S. CO. MARINE SERIES. Furnished by the coöperation of ————, President; Williams, Blanchard & Co., Agents.																			
S. S. City of Peking																			Lt. Z. L. Tanner, U.S.N
OCCIDENTAL AND ORIENTAL S. S. CO. MARINE SERIES. Furnished by the coöperation of George H. Bradbury, President; T. H. Goodman, Agent.																			
S. S. Belgic																			Capt. John Metcalf.
S. S. Gaelic																			Capt. W. H. Kidley
S. S. Oceanic																			Capt. H. Parsell.
NORTH GERMAN LLOYD OF BREMEN MARINE SERIES. Furnished by the coöperation of A. Schumacher & Co., Agents.																			
S. S. Baltimore																			Capt. H. Andressen.
S. S. Berlin																			Capt. C. Pohle.
S. S. Braunschweig																			Capt. K. Undütsch.
S. S. Nürnberg																			Capt. A. Jaeger.
S. S. Ohio																			Capt. G. Meyer.
MARINE SERIES. (Miscellaneous.) Furnished by the coöperation of the Observer named.																			
Schooner Addie Fuller, N. 39°, 47′, W. 73°, 38′	NEbyN	2.5	29.68	751.3	39	3.9	91	NNW	18	8.0		0	6d		N	Swell	NE	Clearing	Capt. James Jorgensen

NOTE.—The schooner Addie Fuller gives the amount of cloudiness by the scale 0 to 4.

COLLATED AT THE OFFICE OF THE CHIEF SIGNAL OFFICER OF THE ARMY, WASHINGTON, D. C.

The records which appear in this Bulletin are copied from the regular exchanges of this office, made in each instance in compliance with an especial request and are published for the uses of the coöperating observers. The barometric readings in the first two columns are reduced to freezing and their respective standards; those in the second two also to mean sea-level. The "weather" is generally published as given.

When the distinction between the upper and lower strata of clouds is not reported, the *kinds* or *types*, viz: cirrus, cumulus, stratus, nimbus, scud, fracto, pallio, haze, fog and smoke, as indicated, respectively, by the letters c, k, s, n, d, f, p, hz., fg. and sm'e, are generally published with the amount in the lower-cloud column. The distinction between the upper and lower strata is carefully made in the United States Series and a portion of the Canadian Series, and the types are indicated by the above letters or their combinations in the proper column.

Albert J. Myer

Brig. Gen. (Bvt. Assg^d.,) Chief Signal Officer, U. S. A.

BULLETIN

OF

INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON FEBRUARY 26, 1877.

7:35 A. M. WASHINGTON mean time.

6:7 A. M. MEXICO mean time.
7:7 A. M. SAN JOSE mean time.
0:6 P. M. LISBON mean time.
0:28 P. M. MADRID mean time.
0:43 P. M. GREENWICH mean time.
0:53 P. M. PARIS mean time.
1:1 P. M. BRUSSELS mean time.
1:4 P. M. UTRECHT mean time.
1:18 P. M. BERNE mean time.
1:26 P. M. CHRISTIANIA mean time.
1:33 P. M. COPENHAGEN mean time.
1:33 P. M. ROME mean time.
1:37 P. M. BERLIN mean time.
1:49 P. M. VIENNA mean time.
1:55 P. M. STOCKHOLM mean time.
2:18 P. M. ATHENS mean time.
2:39 P. M. CONSTANTINOPLE mean time.
2:44 P. M. ST. PETERSBURG mean time.
6:36 P. M. CALCUTTA mean time.
10:2 P. M. TOKEI mean time.

ALGERIAN SERIES.

Furnished by the coöperation of General d'Eudeville, Commandant Supérieur du Génie in Algeria.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Nemours			30.12	765.0	59.2	15.1		NNE			2		2			0	0	Clear	Michel.
Algiers			30.04	762.9	48.6	9.2		W			2		2			0	0	Clear	Biscarrat.
La Calle			29.95	760.6	55.8	13.2		NW			4		6			0.433	11.0	Fair	Fleury.
Tunis			29.93	760.3	56.1	13.4		NW			5		7			0.236	6.0	Cloudy	Jacques.
Sfax																			
Saida			30.11	764.8	48.2	6.2		NNW			2		3			0.315	8.0	Fair	Millot.
Tebessa			30.02	762.5	46.9	8.3		SW			3		6			0	0	Fair	Bourgeois.
Geriville			30.03	762.7	42.8	6.0		N			5		8			0.236	6.0	Cloudy	Lemaillot.
Laghouat			30.05	763.3	48.6	9.2		N			2		2			0	0	Clear	Guyot.
Biskra			30.07	763.6	62.8	17.1		NW			3		1			Inap.	Inap.	Clear	Kunis.

NOTE.—In the originals the distinction between the amount of upper and lower clouds is apparently not made. The weather is published as given. The rain-fall is measured at a. m., local time.

AUSTRIAN SERIES.

Furnished by the cooperation of Professor Dr. Julius Hann, Director of the Imperial and Royal Central Meteorological Institute at Vienna.

Agram			29.50	749.3	52.7	11.5	46	SW			3		4			0.094	2.4		Prof. Ivan Stoitr.
Cracow, I. R. Observatory			29.24	742.8	42.8	6.0	79	WSW			3		8			0.169	4.3		Dr. Wierzbiski.
Eperies			29.31	744.5	48.6	9.2	61	S			3		7c,s		E	0	0		Julius Mikolik.
Gratz	28.25	717.6	29.49	749.1	51.3	10.7	60	WSW			3		0			0	0		Andreas Rospini.
Hermannstadt	28.10	713.8	29.52	749.8	48.6	9.2	49	NW			3		2			0	0		Prof. Reissenberger.
Kremsmünster	28.03	711.9	29.36	745.4	50.4	10.2	58	W			4		5			0.094	2.4		Prof. C. Wagner.
Lemberg			29.28	743.6	39.9	4.4	90	NW			2		7			0.024	0.6		Dr. T. Stanecki.
Nyiregyhaza																			Habzsuda Daniel.
Pola			29.93	752.5	51.8	11.0	64	WSW			1		9cs			0	0		I.R.Hydrographic Office
Szegedin			29.50	749.3	52.5	11.4	59	S			2		6			0	0		Karl Stancel.
Trieste			29.65	753.0	46.4	8.0	81	WNW			1		10			0	0	Cloudy	Prof. V. Farolfi.
Vienna			29.37	746.0	51.1	12.3	44	W			4		3			0	0		I. R. Central Met. Obs'y.

NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 7 p. m., local time. The elevation of Gratz is 348.6 meters, or 1,126.9 feet; Hermannstadt, 407.5 meters, or 1,337.9 feet; Kremsmünster, 383.6 meters, or 1,258.5 feet.

BELGIAN SERIES.

Furnished by the cooperation of J. C. Houzeau, Director of the Royal Observatory at Brussels.

Arlon			29.32	744.8	38.3	3.5	85	SW			6		10			0.425	10.8	Graupelnd..	Royal Observatory
Brussels			29.22	742.2	39.7	4.3	91	WNW			7		10n		NW	0.518	13.16	Heavy rain..	
Furnes			29.28	743.6	39.6	4.2	74	NW			6		10			0.071	1.8		
Maeseyck			29.11	739.3	47.7	8.7	64	WSW			8		5			0.205	5.2		

NOTE.—In the originals, the weather is occasionally given in general notes.

BRITISH SERIES

Furnished by the coöperation of Robert H. Scott, Esq., Director of the Meteorological Office, London, Alexander Buchan, Secretary of the Scottish Meteorological Society, Edinburgh, and the respective Observers.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Aberdeen			29.50	749.3	30.6	— 0.8		NNW	30	13.4			7			0.085	2.16	Snowing	William Boswell.
Ardrossan			29.69	751.6	40	4.4		NW			3		4					*D. clouds	William McNeil.
Armagh, Observatory			29.71	754.6	39.2	4.0		WNW	9	4.0			1			Blank	Blank	*D. clouds	S. Call, for Dr. Robinson.
Bidston (Liverpool Obs.)			29.60	751.8	39.0	3.9		NW	25	11.2			2					Blue sky	John Hartnup.
Birr Castle, (Parsonstown)			29.78	756.4	43.4	6.3		NW			2		4					*D. clouds	J. Dreyer.
Bradford			29.54	750.3	37.2	2.9		NW			0		0			0.71	18.0	Blue sky	J. McLandsborough.
Bridgetown, (Barbados)			30.00	762.0	84.0	28.9		NE			2		3					*D. clouds	Sergt. J. F. Halanen, A.
Cambridge, Observatory			29.44	747.8	40.5	4.7		N			4		10					Overcast	H. Todd. [H.C.
Cardington			29.51	749.5	40.4	4.7		N			6		8					Overcast	John McLaren.
Carlisle																			T. Bell, for J. Cartmell.
Chatham, School M. E.			29.44	747.8	40.2	4.6		NE			4		6					Blue sky	Maj. C. N. Martin, R.E.
Dartmoor	28.18	715.8	29.71	754.6	39.0	3.9		N			6		7					*D. clouds	R. E. Power.
Davos Platz, (Switzerland)	24.40	619.8			40.0	4.4	56	SW			2		3			0.221	5.6	*D. clouds	Francis Redford, M. A.
Donaghadee			29.65	753.1	40	4.4		NNE			6		2					Blue sky	J. Mac Gowan.
Dover			29.38	746.2	41	5.0		N			5		5					Hailing	J. Costello.
Eccles, (near Manchester)			29.67	751.1	38.7	3.7		NW	9.8	4.4			5					*D. clouds	Thomas Mackereth.
Falmouth, Observatory			29.72	754.9	43.2	6.2		NW			4		3					*D. clouds	The Staff.
Fort Napier, (Natal)	27.62	701.5	29.86	758.4	69.4	20.8		SE			3		10					Overcast	P'vt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.89	759.2	88	31.1		N			2		5					*D. clouds	
Galway, Queen's College			29.76	755.9	51	10.6		NW			1		6					*D. clouds	Prof. A. H. Curtis.
Gibraltar, (Mediterranean)			30.10	764.5	62.3	16.8		W			3		2					*D. clouds	Corpl. C. Aitken, A.H.C.
Glasgow, Observatory			29.57	751.1	38.3	3.5		W			2		6					*D. clouds	Lewis Stuart.
Great Yarmouth			29.34	745.2	38	3.3		NW			5		5					Squally	G. T. Watson.
Greenwich, Royal Obs'y			29.45	748.0	39.5	4.2		N			4		9			Blank	Blank	*D. clouds	The Staff, for G. B. Airy.
Guernsey			29.60	751.8	44.5	6.9		WNW			7		4					*D. clouds	Dr. S. E. Hoskins.
Helston			29.75	755.6	48	8.9		NW			6		3c			0	0	*D. clouds	M. P. Moyle.
Holyhead			29.68	753.9	41	5.0		NW			3		2					Blue sky	John Tilston.
Kew, Observatory			29.48	748.8	39.8	4.3		NNW	25	11.2			10k					Threatening	The Staff.
Kingstown			29.72	754.9	40	4.4		NW			5		4					*D. clouds	George Mitchell.
Leicester Museum			29.52	749.8	38.6	3.7		N			6		9					Overcast	Wm. J. Harrison, F.G.S.
Malta, (Mediterranean)			29.90	759.4	57.2	14.0		NW			2		6k					*D. clouds	Corp'l. P. Bravis, A.H.C.
Nairn			29.59	751.6	31	— 0.6		NNW			5		5					¾ clouded	W. D. Penny.
Nassau, (Bahamas)			30.07	763.8	70.4	21.3		SE			1		10					Raining	Surg. Maj. Henry.
Nottingham, Observatory			29.53	750.0	37.4	3.0		NNW			4		1c,k		NNW	0.330	8.53	Blue sky	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			29.55	750.6	34.8	1.6		NNW			3		2					*D. clouds	Rev. Stephen Whitty.
Oxford, Radcliffe Obs'y			29.52	749.8	39	3.9		N			4		3			Blank	Blank	Blue sky	J. Lucas.
Plymouth			29.65	753.1	47.5	8.6		NW			4		4					*D. clouds	John Merrifield.
Roche's Point			29.78	756.4	44	6.7		NNW			5		5					Cloudy	W. Kennedy.
Saint Ann's Head			29.69	754.1	43	6.1		NNW			5		5						John C. Walker.
Saint Helier, (Jersey)			29.61	752.1	46.8	8.2		N			6		8					¾ clouded	A. P. Amy.
Sandwick Manse, (Orkneys)			29.49	749.0	28	— 2.2		NW	48	21.5			10					Snowing	Rev. C. Clouston, LL. D.
Scarborough																			F. Shaw.
Scutari Cemetery, (Turkey)			29.53	750.0	53.2	11.8		NE			2		10			Blank	Blank	Gloomy	Sergt. W. H. Lyne.
Sheffield			29.50	749.3	38.5	3.6		N			3		3			0.043	1.10	Blue sky	W. F. Cooper.
Silloth Rectory			29.58	751.3	45.3	7.4	60	N			6		1			0.210	5.33	*D. clouds	Rev. Francis Redford
Stonyhurst, Observatory			29.56	750.8	36.0	2.2		NW			4		3					Blue sky	Rev. S. J. Perry.
Stornoway, Lews C., (Hebr.)			29.64	752.8	31	— 0.6		NNW			6		10					Snowing	John Smith.
Stratfield Turgiss			29.49	749.0	40.0	4.4		NW			3		7					Squally	Rev. Charles H. Griffith.
Thurso			29.50	749.3	32	0.0		NW			6		7					*D. clouds	John Trotter.
Truro, Royal Institution			29.75	755.6	48	8.9		NW			8		5					*D. clouds	W. Newcombe.
Valencia, Observatory			29.84	757.9	45.0	7.2		N	9	4.0			3					*D. clouds	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man)																			Henry Mercer.
Cape Good Hope, Obs'y			30.04	763.0	71.8	22.1	47	SSE	27	12.1		0	1						The Staff, for E. J. Stone.
Hobart Town, (Tasmania)			29.70	754.4	71.0	21.7	88	S			1		10n					Light rain	Francis Abbott, F.R.A.S.
Leith, Restalrig Park			29.60	751.8	36.8	2.7		NW			2		5k			0	0	Fine	Andrew Gibb.
Mauritius, Observatory			30.04	763.0	81.1	27.3	68	ENE	14.0	6.3		9	2	NW	E	0.26	6.6	Cloudy	C. Meldrum.
Melbourne, Observatory			29.86	758.4	67.9	19.9	79	SW	5	2.2			0			0	0	Very fine	R. L. J. Ellery.
Monach L't-house, (Hebrides)																			J. Youngclause.
North Unst, (Shetland Is.)																			Robert Burnet.

Note.—Generally, the originals do not give the relative humidity, rain-fall, or distinction between upper and lower clouds. The originals give the wind direction to 32 points and weather by the Beaufort notation. The originals give the barometer for Aberdeen, Cardington, Freetown, Galway, Oxford, St. Helier, Sandwick, Scarborough, Stonyhurst, Leith, Monach and North Unst as read off and the amount of cloudiness for Stornoway by the scale 0 to 4. The wind-force is given by the scale 0 to 12 in the official series; 0 to 6 in the sub-series; except in lbs. per square foot for Greenwich and Hobart Town. The rain-fall is measured at Aberdeen at 10 a. m.; Bradford, 9 a. m.; Hobart Town, 7:30 a. m.; Nottingham, 6 p. m.; Mauritius, 9 a. m., local time. The elevation of Dartmoor is 1,400 feet, or 426.7 meters; Davos Platz, 5,105? feet, or 1,556.0? meters; Fort Napier, 2,200 feet, or 670.6 meters. *Detached clouds.

By authority of the Minister of Foreign Affairs.

COSTA RICA SERIES.

Furnished by the coöperation of Senor Federico Maison, Director of the Central Office of Statistics and Meteorology.

San José																			

DANISH SERIES.

Furnished by the coöperation of Captain N. Hoffmeyer, Director of the Royal Danish Meteorological Institute at Copenhagen.

Copenhagen			28.88	733.5	31.6	— 0.2	90	NE			4		10						
Fanöe			28.95	735.4	31.5	— 0.3	81	N			7		5						
Godthaab, (Greenland)			29.47	748.6	17.6	— 8.0		N			6		10					Snowing	
Stykkisholm, (Iceland)			30.31	769.9	6.8	—14.0	91	NE			7		8						
Thorshavn, (Faröe)			29.70	754.4	16.9	— 8.4	76	N			5		5					Snowing	
Vestervig			28.98	736.2	24.1	— 4.4	95	N			2		10						

Note.—The originals give the wind-force by the scale 0 to 6; occasionally, weather by Vienna symbols; no distinction between the amount of upper and lower clouds.

FRENCH SERIES.

Furnished by the cooperation of His Excellency, U. J. Le Verrier, Director of the Paris Observatory, and the respective Observers.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters	Weather.	Observer.
Alengon	.....	.....	29.54	750.3	44.6	7	95	NW	.....	.....	4	.....	5kn	.....	NW	0	0	Cloudy.....	Normal School.
Amiens	.....	.....	29.33	745.0	49.3	9.6	94	W	.....	.....	3	.....	2	.....	W	0.150	3.8	Slightly cl'dy	Normal School.
Avignon	.....	.....	29.78	756.5	61.9	16.6	31	NW	.....	.....	2	.....	0	.....	.....	0	0	Very clear...	Normal School.
Bar-sur-Seine	.....	.....	29.49	749.1	47.1	8.4	81	SW	.....	.....	8	.....	10	.....	SW	0.008	0.2	Raining.....	C. Saillard.
Beaumette, (near Angers)	.....	.....	29.63	752.5	48.7	9.3	61	NW	44.1	19.7	.....	.....	.....	.....	W	0.039	1.0	.....	Beaumette Observ'tory.
Beauvais	.....	.....	29.47	748.6	47.7	8.7	69	W	.....	.....	6	.....	8	.....	W	0.089	2 26	Very cloudy	Normal School.
Besançon	.....	.....	29.65	753.2	46.4	8	82	SW	.....	.....	6	.....	8	.....	S	0.20	5.	Very cloudy	Normal School.
Bourg en Bresse	.....	.....	29.79	756.6	50.0	10	74	S	.....	.....	2	.....	10n	.....	SW	0.094	2.4	Raining.....	Normal School.
Bourges	.....	.....	29.67	753.7	49.6	9.8	84	WSW	.....	.....	6	.....	10	.....	WSW	0.035	0.9	Covered	Normal School.
Brest	.....	.....	29.69	754.0	49.5	9.7	79	NNW	.....	.....	5	.....	4	.....	NNW	0.010	0.25	.....	Naval Observatory.
Carcassonne	.....	.....	29.96	760.9	54.3	12.4	70	W	.....	.....	1	.....	10	.....	E	0.138	3.5	Covered	Normal School.
Caen	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Chartres	.....	.....	29.54	750.2	47.1	8.4	75	W	.....	.....	6	.....	10	.....	E	0	0	Covered	Normal School.
Châlons-sur-Marne	.....	.....	29.37	746.0	45.9	7.7	94	W	.....	.....	8	.....	10	.....	.....	0.004	0.1	Raining.....	Puy de Dome Obs'y.
Clermont	.....	.....	29.68	753.9	51.1	10.6	56	W	.....	.....	6	.....	5	.....	W	0	0	.....	Normal School.
Commercy	.....	.....	29.58	751.4	48.5	6.4	91	SW	.....	.....	8	.....	8n	.....	SW	0.20	5.	Very cloudy	M. Kina.
Commune de Gréasque*	.....	.....	29.81	757.1	55.2	12.9	38	NW	.....	.....	4	.....	0	.....	.....	0	0	.....	Normal School.
Grenoble	.....	.....	29.77	756.1	48.6	9.2	75	NE	.....	.....	4	.....	2k	.....	SE	0.08	2.	Slightly cl'dy	Normal School.
La Roche-sur-Yon	.....	.....	29.73	755.2	50.7	10.4	77	W	.....	.....	4	.....	8	.....	SE	0.047	1.2	Very cloudy	Normal School.
Le Mans	.....	.....	29.58	751.2	47.7	8.7	81	NW	.....	.....	8	.....	5	.....	W	0	0	Cloudy.....	Normal School.
Lons-Le-Saulnier	.....	.....	29.69	754.0	46.2	7.9	83	SW	.....	.....	4	.....	10	.....	.....	0.134	3.40	Raining.....	Naval Observatory.
Lorient	.....	.....	29.73	755.2	52.4	11.2	47	NW	.....	.....	3	.....	8	.....	NW	0.035	0.9	Very cloudy	Normal School.
Mâcon	.....	.....	29.69	754.2	50.0	10	86	SE	.....	.....	2	.....	10	.....	.....	0	0	Covered	M. Schuster.
Metz	.....	.....	29.42	747.3	44.6	7.0	92	SW	.....	.....	6	.....	10	.....	.....	0.197	5.0	Storm.....	Normal School.
Mirecourt	.....	.....	29.47	748.6	45.3	7.4	83	SW	.....	.....	6	.....	10	.....	NE	0.08	2.	Covered	Normal School.
Nismes	.....	.....	29.78	756.4	63.7	17.6	50	W	.....	.....	1	.....	.....	.....	.....	0	0	.....	Normal School.
Orleans	.....	.....	29.55	750.6	50.0	10	79	NW	.....	.....	2	.....	10	.....	SSW	0	0	Covered	National Observatory.
Paris, Observatory	.....	.....	29.43	747.4	47.5	8.6	69	W	.....	.....	3	.....	10	.....	.....	0.056	1.42	Covered	Normal School.
Parthenay	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Privas	.....	.....	29.77	756.2	57.6	14.2	44	SE	.....	.....	2	.....	2	.....	SE	0	0	Slightly cl'dy	Naval Observatory.
Rochefort, Observatory	.....	.....	29.80	757.0	53.1	11.7	75	SW	.....	.....	6	.....	10	.....	N	0	0	Covered	Normal School.
Rouen	.....	.....	29.38	746.3	47.3	8.5	82	W	.....	.....	6	.....	10	.....	W	0.063	1.6	Covered	Normal School.
Saint Lo	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Tarbes	28.80	731.4	29.02	760.0	52.2	11.2	95	W	.....	.....	4	.....	10	.....	.....	0.08	2.	Covered	Normal School.
Villefranche	.....	.....	29.74	755.3	55.4	13	80	W	.....	.....	3	.....	5	.....	SW	0.126	3.2	Cloudy.....	
Sub-Series.																			L'Abbé Marchési.
Fort de France, Martinique	.....	.....	29.88	759.0	78.8	26	.....	.....	.....	.....	.....	.....	.....	.....	.....	0	0	Partly cl'dy.	Marseilles Observatory.
Marseilles	.....	.....	29.77	756.1	59.0	15.0	46	WNW	.....	.....	4	.....	.....	.....	.....	0	0	.....	—. Falguère.
Mont-Louis	24.72	627.8	30.03	762.8	42.8	6.0	32	WSW	7.4	3.33	.....	.....	0	.....	.....	.....	.....	.....	Montsouris Observatory
Montsouris, Paris	.....	.....	29.41	747.1	46.9	8.3	70	W	.....	.....	4	.....	10	.....	W	0.075	1.9	.....	Dr. Fines.
Perpignan	.....	.....	29.88	758.9	58.8	14.9	47	NW	29.8	13.33	.....	.....	7	.....	NW	0	0	.....	M. Baylac.
Pic du Midi, (Summit,) H. P.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	General de Nansouty.
Pic du Midi, (Plantade,) H. P.	22.37	568.2	.....	.....	31.1	— 0.5	.....	N	.....	.....	4	.....	2	.....	.....	1.217	30.9	Clear	E. Renou.
Saint Maur, (near Paris)	.....	.....	29.43	747.4	47.1	8.4	79	NW	.....	.....	2	.....	10	.....	.....	0.067	1.7	Very cloudy	Toulouse Observatory.
Toulouse	.....	.....	29.96	761.0	51.1	10.6	79	WNW	.....	.....	4	.....	9	.....	.....	0.193	4.9	.....	C. Marquet.
Tours	.....	.....	29.57	751.1	52.2	11.2	65	WNW	.....	.....	5	.....	10	.....	W	0.020	0.5	.....	Dr. A. Berigny.
Versailles, (near Paris)	.....	.....	29.43	747.6	47.5	8.6	78	W	.....	.....	6	.....	10	.....	.....	0.165	4.18	Showery.....	Marc Dechevrens, S. J.
Zi-Ka-Wei, (near Shanghai)	.....	.....	30.44	773.1	33.6	0.9	75	Calm	0	0	.....	.....	0	.....	.....	0	0	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

NOTE.—Generally, the originals give the wind-force by the scale 0 to 7; no distinction between upper and lower clouds, and, in the official series, the amount by the scale 0 to 4; the rain-fall as measured at 7, 8 or 9 a. m., local time; at Clermont, 9 a. m. of the following day; the weather in general terms as published. The elevation of Clermont is 388 meters, or 1,272.9 feet; Commune de Gréasque, 322 meters, or 1,056.4 feet; Tarbes, 308 meters, or 1,010 feet; Mont-Louis, 1,586.40 meters, or 5,204.8 feet; Pic du Midi, (Summit,) 2,877 meters, or 9,439.1 feet; Pic du Midi, Plantade,) 2,366 meters, or 7,762.6 feet. In correcting the Mont-Louis barometric observations for altitude, the constant 135. millimeters has been added. *Bouches-du-Rhône

GERMAN SERIES.

Furnished by the coöperation of Professor Dr. G. Neumayer, Director of the German Naval Observatory, Hamburg.

Bamberg	.....	.....	28.25	743.0	44.6	7.0	75	WSW	.....	.....	8	.....	9	W	.....	0.236	6.0	.....	Prof. T. Hoh
Berlin	.....	.....	28.99	736.3	37.0	2.8	73	S	.....	.....	2	.....	10	.....	.....	0.406	10.3	Raining.....	Prof. Arndt.
Breslau	.....	.....	29.15	740.3	44.8	7.1	72	WSW	.....	.....	4	.....	10	.....	.....	0.047	1.2	Sprinkling...	Royal University Obs'y
Carlsruhe	.....	.....	29.33	744.9	48.2	9.0	67	SW	.....	.....	10	.....	10	.....	.....	0.335	8.5	.....	A. Senz.
Cassel	.....	.....	29.06	738.0	44.1	6.7	88	WSW	.....	.....	7	.....	10	NW	.....	0.165	4.2	Rain & snow	Dr. H. Möhl.
Crefeld	.....	.....	29.04	737.6	47.1	8.4	75	W	.....	.....	7	.....	7	.....	.....	0.68	16.	Rain & snow	Director Lose.
Emden	.....	.....	29.17	740.8	38.8	3.8	67	NNW	.....	.....	6	.....	10	.....	.....	0.283	7.2	.....	Prof. Prestel.
Frankfort on the Main	.....	.....	29.24	742.7	47.6	8.8	70	SW	.....	.....	6	.....	10	.....	.....	0.185	4.7	Raining.....	Physical Society.
Friedrichshafen	28.10	713.7	29.52	749.8	49.6	9.8	53	WSW	.....	.....	10	.....	4	.....	.....	0.236	6.0	Rain & snow	M. Wilhelm.
Hamburg	.....	.....	28.98	736.1	35.8	2.1	91	WSW	.....	.....	4	.....	10	.....	.....	0.161	4.1	Rain & snow	Captain F. Hegemann.
Kiel	.....	.....	28.91	734.4	38.8	3.8	75	W	.....	.....	6	.....	10	.....	.....	0.220	5.6	.....	Prof. G. Karsten
Königsberg, (Prussia)	.....	.....	28.98	736.2	34.9	1.6	79	SW	.....	.....	5	.....	6	.....	.....	0.118	3.0	Snowing.....	Prof. E. Luther.
Köslin	.....	.....	29.02	737.0	36.5	2.5	.....	SW	.....	.....	2	.....	10	.....	.....	0	0	.....	H. Müller.
Leipsic	.....	.....	29.07	738.4	45.7	7.6	74	SW	.....	.....	6	.....	10	SW	.....	0.311	7.9	Raining.....	Prof. Bruhns.
Memel	.....	.....	28.93	734.8	31.1	— 0.5	71	W	.....	.....	5	.....	8k	W	.....	0.217	5.5	Snow-shower	Reinbrecht & Skalweit.
Münster	.....	.....	29.01	736.9	37.9	3.3	98	NW	.....	.....	3	.....	10	.....	.....	0.579	14.7	.....	Prof. E. Heis.
Neufahrwasser	.....	.....	28.98	736.1	37.9	3.3	73	W	.....	.....	5	.....	5	.....	.....	0.047	1.2	.....	A Lothe.
Posen	.....	.....	29.13	739.8	37.4	3.0	92	SW	.....	.....	6	.....	10	.....	.....	0.327	8.3	.....	Dr. Magener.
Strassburg, (in Alsace)	.....	.....	29.43	747.6	49.5	9.7	70	W	.....	.....	4	.....	10	SW	.....	0.028	0.7	.....	Dr. Schur.
Stuttgart	.....	.....	29.35	745.4	49.5	9.7	53	W	.....	.....	6	.....	5	.....	.....	0.461	11.7	.....	Prof. Schoder.
Thorn	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Dr. Hasenbalg.
Treves, (Trier)	.....	.....	29.14	740.1	45.3	7.4	83	SW	.....	.....	9	.....	10	.....	.....	0.197	5.0	.....	Prof. Flesch.
Weissenburg, (Bavaria)	27.85	707.4	29.35	745.4	44.8	7.1	61	SW	.....	.....	7	.....	10	.....	.....	0.146	3.7	.....	Dr. von Bebber.
Wustrow, Naval School	.....	.....	29.02	737.1	37.6	3.1	83	SW	.....	.....	5	.....	10	.....	.....	0	0	.....	E. F. Schütz.
German Naval Series.																			
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

NOTE.—The elevation of Friedrichshafen is 413.4 meters, or 1,356.3 feet; Weissenburg, 431 meters, or 1,414.3 ft. In the originals the distinction between the amount of upper and lower clouds is not made. It is not always certain that the remarks in the weather column refer to the moment of observation.

GREEK SERIES.

Furnished by the coöperation of Professor Dr. J. F. Julius Schmidt, Director of the Royal Observatory at Athens.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Athens			29.57	751.1	59 0	15.0		NE										Cloudy	

Note.—The originals give the barometer corrected, but not reduced to sea-level; occasionally the kind of clouds; the weather as published. They omit the humidity, wind-force, amount of cloudiness and rain-fall.

INDIAN SERIES.

Furnished by the coöperation of H. F. Blanford, Meteorological Reporter to the Government of India.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Kurrachee																			
Deesa																			
Bombay																			
Poona																			
Lahore																			
Belgaum																			
Bangalore																			
Rorkee																			
Agra																			
Trichinopoly																			
Nagpur																			
Madras																			
Lucknow																			
Allahabad																			
Patna																			
Hazaribagh																			
Cuttack																			
Calcutta (Alipore)																			
Goalpara																			
Chittagong																			
Sibsagar																			
Rangoon																			
Jubbulpore																			

ITALIAN SERIES.

Furnished by the coöperation of His Excellency the Minister of Agriculture, Industry and Commerce, and the respective Observers.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Udine			29.60	751.7	46.1	7.8	67	Calm	0	0		10				0	0		Prof. Giovanni Clodig.
Stelvio	21.71	551.5			22.1	— 5.5		W			6	3		ENE		0.110	2.8		Signora Ernesta Manfredi.
Valdobbia	21.75	552.5			24.3	— 4.3	70	W			6	6		NW		0	0		Ab. Dom. Mongini.
Padua			29.60	751.9	44.8	7.1	62	NW	1.3	0.6		10		W		0	0		Prof. Dott. Lorenzoni.
Vicenza			29.61	752.0	45.9	7.7	60	S	1.3	0.6		6		W		0	0		Conte Alm. Da Schio.
Verona			29.63	752.6	49.1	9.5	85	E			1	10				0	0		Dott. B. Bertoncelli.
Bergamo	28.25	717.5	29.59	751.5	48.2	9.0	61	W			2	7				0	0		Prof Trionfini Carlo.
Domodossola			29.59	751.6	45.5	7.5	52	Calm			0	3				0	0		Prof. Giuseppe Calza.
Milan			29.58	751.4	47.8	8.8	77	NNW			1	2		NW		0	0		Ab. Gio. Capelli
Pavia			29.59	751.5	50.4	10.2	62	SW			4	0				0	0		Prof. Gio. Cantoni.
Moncalieri			29.60	751.9	50.7	10.4	58	SSE	1 8	0.8		1		W		0	0		Prof P. F. Denza.
Mondovi	27.69	703.2	29.63	752.5	55.6	13.1	32	NE			2	0				0	0		Prof. D. C. Bruno.
Porto Maurizio			29.69	754.1	52.5	11.4	74	E			4	2				0	0		Prof. L. Vassallo.
Genoa			29.66	753.3	54.1	12.3	64	SE	8.1	3.6		10		S		0	0		Prof. G. M. Garibaldi.
Piacenza			29.61	752.1	51.4	10.8	59	N	1.3	0.6		0				0	0		Dott. G. Manzi.
Parma			29.58	751.2	56.5	13.8	46	SW			6	0				0	0		Prof. P. Pigorini.
Florence			29.71	754.7	52.7	11 5	65	E			2	10		SW		0	0		Cav. F. Meucci.
Leghorn			29.69	754.0	54.5	12.5	70	S	4.9	2.2		10		SW		0	0		Prof. P. Monte.
Siena	28.47	723.0	29.70	754.3	48.0	8.9	74	WSW	0	0		10		W		0	0		Prof. L. Toscani.
Urbino	28.12	714.1	29.71	754.7	46.8	8.2	67	SW			2	2				0	0		Prof. P. Serpieri.
Pesaro			29.64	752.9	52.7	11.5	63	SW	26.2	11.7		1		SW		0	0		Prof. Luigi Guidi.
Ancona			29.62	752.3	53.2	11.8	57	SE			4	3				0	0		Prof. F. De— Bosis.
Grosseto			29.70	754.3	55.9	13.3	62	SSW			2	7		NW		0	0		Avv. P. Ponticelli.
Rome			29.72	754.8	56.1	13.4	61	SE	6.9	3.1		2		SW		0	0		Prof's. P. Secchi & L. Respighi
Naples, O. U			29.75	755.6	55.8	13.2	52	WSW			4	7		W		0	0		Prof. L. Palmieri.
Lecce			29.72	755.0	53.6	12.0	50	NNE	9.8	4.4		3				0	0		Prof. C. De—Giorgi.
Cosenza			29.78	756.3	53.4	11.9	68	NE	2.6	1.1		5				0	0		Prof. F. D. Conti.
Cagliari			29.76	755.9	58.1	14.5	60	NW			6	8		NW		0.079	2.0	Raining	Prof. A. Pacinotti.
Riposto, (Sicily)			29.72	754.9	57.6	14.2	61	SE			2	5		NE		0	0		Prof. F. Caflero.
Palermo			29.75	755.6	56.1	13.4	42	WNW	8.1	3.6		4				0	0		Prof. G. Cacciatore.
Caltanissetta	27.88	708.0	29.86	758.5	52.3	11.3	62	W			6	4		SE		0	0		Prof. A. Pagani.
Siracusa			29.70	754.4	61.3	16.3	68	W			2	6		WNW		0	0		Prof. V. Giuliano.
Sub-Series.																			
Naples, S. R.			29.78	756.4	52.7	11.5	70	W	4.5	2.2		8		NW		0	0		Prof. F. Brioschi

Note.—The originals give the wind-force by the scale 0 to 4, or the velocity in kilometers per hour; generally, no distinction between upper and lower clouds; occasionally the weather by the Vienna symbols. The elevation of Stelvio is 2,543.0 meters, or 8,342.9 feet; Valdobbia, 2,548.0 meters or 8,359.3 feet; Bergamo, 379.6 meters, or 1,245 3 feet; Mondovi, 556 meters, or 1,824.2 feet; Siena, 348.5 meters, or 1,143.3 feet; Urbino, 451 meters, or 1,479.7 feet; Caltanissetta, 570.3 meters, or 1,871.0 feet.

JAPANESE SERIES.

Furnished by the coöperation of the Imperial University of Tokei, Japan.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Tokei																			Prof. P. V. Veeder.

Note.—The originals give the amount of cloudiness by the scale 0 to 4 without distinguishing between upper and lower clouds. The rain-fall is measured at 7 a. m., local time.

By authority of the SECRETARY OF PUBLIC WORKS.

MEXICAN SERIES.

Furnished by the coöperation of Senor Mariano Barcena, Director of the Central Meteorological Observatory in the City of Mexico.

STATIONS.	Barometer: Corrected for instrum'tal error and temperature. Inches.	Barometer: Corrected for instrum'tal error and temperature. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Mexico																			Mariano Barcena.
																			Vicente Reyes.
																			Miguel Perez. (Engineers in charge.)

NOTE.—The elevation of Mexico is 2,290 meters, or 7,512.9 feet. The rain-fall is measured at 6 a. m., local time.

NETHERLANDS' SERIES.

Furnished by the cooperation of Professor Buys Ballot, Director of the Royal Meteorological Institute of the Netherlands at Utrecht.

Flushing			29.26	743.3	40.1	4.5		NNE			5					0.098	2.5		
Groningen			29.02	737.0	38.3	3.5		N								0.201	5.1		
Helder			29.15	740.5	40.5	4.7		N			5					0.303	7.7		
Utrecht			29.13	739.8	34.9	1.6	96	NNW			4		10			0.362	9.2	Overcast.	

NOTE.—The originals give the wind-pressure in kilograms per square meter; for Utrecht, they give the weather as published, from which the amount of cloudiness is taken by the scale 0 to 4, without distinguishing between upper and lower clouds. It is assumed that the barometer readings have been reduced to sea-level.

NORWEGIAN SERIES.

Furnished by the cooperation of Professor H. Mohn, Director of the Royal Norwegian Meteorological Institute at Christiania.

Bergen			28.96	735.5	29.5	— 1.4	76	N	16.1	7.2			3			0.264	6.7		
Brönö			29.01	736.8	18.1	— 7.7	48	E	6.7	3			2			0	0		
Christiania			28.96	735.5	18.0	— 7.8	72	SSW	0	0			8			0	0		
Tromsö			29.00	736.5	14.9	— 9.5	84	SW	8.9	4			7			0.130	3.3		

NOTE.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols. The cloudiness and weather at Bergen refer to 2h., p. m., local time, instead of 1h., 4 min.

PORTUGUESE SERIES.

Furnished by the cooperation of J. C. de Brito Capello, Director of the Meteorological Observatory of the Infante Don Luiz at Lisbon.

Angra, (Azores)			30.13	765.2	58.1	14.5	89	SSE	11.2	5.0			9			0.512	13.0		Dr. J. A. Sampaio.
Campo Major			30.10	764.5	56.5	13.6	56	SW	8.1	3.6			2			0	0		Dr. A. M. R. dos Santos.
Funchal, (Madeira)			30.27	768.8	63.7	17.6	50	SE	6.9	3.1			6			0	0		Capt. D. A. de Cunha.
Lisbon			30.15	765.9	57.7	14.3	57	NNW	12.5	5.6			8			0	0		The Observatory.
Ponta Delgada, (Azores)			30.21	767.2	61.5	16.4	75	SW	7.4	3.3			3			0	0		

NOTE.—The originals give the wind-velocity in kilometers per hour, occasionally, the weather by the Vienna symbols; the amount of cloudiness without distinguishing between upper and lower clouds; the barometer corrected but not reduced to sea-level. The rain-fall at Lisbon is measured at noon, instead of 0 h. 6 m., p. m.

RUSSIAN SERIES.

Furnished by the cooperation of Professor H. Wild, Director of the Imperial Central Physical Observatory of Russia, at St. Petersburg.

Warsaw			29.15	740.4	36.0	2.2	85	SW	13	6			10					Light rain	Astronomical Obs.
Wilna			28.99	736.3	33.1	0.6	79	WSW	4	2			10						Astronomical Obs.
Dorpat			28.78	730.9	28.0	— 2.2	87	W	11	5			10						Physical Cabinet.
St. Petersburg			28.74	730.0	33.8	1.0	86	SSW	11	5			10						Central Physical Obs.
Kuopio			28.72	729.4	23.4	— 4.8	100	NE	7	3			10					Snowing	Ch. Forsten.
Kieff			29.23	742.4	39.0	3.9	57	W	22	10			4						Physical Cabinet.
Nikolaiev			29.50	749.3	44.6	7.0	71	SW	29	13			8						Kurdakof
Kertch			29.71	754.5	54.9	12.7	69	SSW	9	4			1						Lagorio.
Moscow			29.05	737.9	27.5	— 2.5	94	S	18	8			10					Snowing	Meteorological Obs.
Lugan			29.48	748.7	38.5	3.6	82	SW	18	8			7						Meteorological Obs.
Archangel			29.04	737.7	13.6	—10.2	93	ESE	13	6			10						Ogorodnikof.
Tiflis	28.61	726.7	30.03	762.8	55.2	12.9	51	N	4	2			7						Physical Observatory.
Astrakhan			29.92	760.0	38.8	3.8	77	S	9	4			4						Sebastianof.
Kasan			29.56	750.8	26.8	— 2.9	83	Calm	0	0			4						Physical Cabinet.
Orenburg																			Tschernischef.
Ekaterinburg	28.02	726.9	29.61	752.0	23.5	— 4.7	81	SE	4	2			10						Meteorological Obs.
Nukuss			29.88	758.9	65.7	18.7	46	S	4	2			9						
Kasaly																			Bobrof.
Tashkend																			Michelson.
Barnaul																			Meteorological Obs.
Yeniseisk			30.34	770.5	7.0	—13.9	83	SW	4	2			8						Marks.
Irkutsk			29.87	758.0	19.9	— 6.7	56	S	2	1			10						Usolzef.
Peking, (China)																			Physical Observatory.
Nertchinsk			30.30	769.5	35.4	1.9	42	Calm	0	0			0						Meteorological Obs.
Vladivostock																			
Nikolaievsk, on the Amoor																			

NOTE.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols; they omit the rain-fall. The elevation of Tiflis is 409 meters, or 1,341.8 feet; Ekaterinburg, 306.4? m., or 1,005.2? ft.; Tashkend, 494.2? m., or 1,621.3? ft.; Irkutsk, 392 m., or 1,286 ft.; Nertchinsk, 592.0? m., or 1,942.2? ft.

SPANISH SERIES.

Furnished by the cooperation of Antonio Aguilar, Director of the Royal Observatory at Madrid, and of Don Cecilio Pujazon, Captain R. N. Director of the Naval Observatory at San Fernando.

Madrid			30.01	762.3	57.2	14.0	49	S	3.7	1.67		0	0			0	0	Clear	Royal Observatory.
San Fernando			30.16	766.0	58.8	14.9	64	WNW	5.8	2.6		0	6		WNW	0	0		Naval Observatory.

NOTE.—The originals give the weather in general terms, as published; rain-fall for San Fernando from preceding to following midnight; wind-velocity for Madrid in kilometers per hour.

SWEDISH SERIES.

Furnished by the coöperation of Professor R. Rubenson, Director of the Royal Swedish Meteorological Institute, at Stockholm, and of Dr. H. H. Hildebrandsson, Chief of the Meteorological Division of the Upsala Observatory.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Upp'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Haparanda			28.98	736.1	2.1	—16.6	90	N			4		0			0	0		
Umea																			
Hernosand			28.89	733.8	11.1	—11.6	78	N			6		8			0	0		
Stockholm			28.80	731.5	11.8	—11.2	100	NNW			6		10			0.335	8.5	Snowing	
Wisby			28.87	733.2	17.2	— 8.2	88	NW			7		10			0.031	0.8	Snowing	
Sub-Series.																			
Upsala			28.84	732.6	10.9	—11.7	89	NNW	14.5	6.5			10			0.630?	16.00?	Snowing	Dr. Hildebrandsson.

Note.—The originals give the wind-force by the scale 0 to 6, and Upsala also velocity in meters per second; occasionally, the weather by the Vienna symbols, or in general terms; no distinction between the amount of upper and lower clouds. The rain-fall is measured at 8 a. m., local time.

SWISS SERIES.

Furnished by the coöperation of Professor R. Wolf, Director of the Observatory at Zurich, and of Professor E. Plantamour, Director of the Observatory at Geneva.

Geneva	28.31	719.0	29.75	755.7	48.4	9.1	58	SW			4		10			0.016	0.4	Cloudy	The Observatory.
Zurich	27.94	709.6	29.59	751.6	49.3	9.6	49	W			6–8		3		W	0.079	2.0	Stormy	The Observatory.

Note.—For Geneva the corresponding departures from the normal values are: Barometer, —9.7 mm; Thermometer, +4.0 cent.; Relative Humidity, —10 per cent.

Note.—The rain-fall is measured at Zurich at 7 a. m. on the following day. The originals give the barometer corrected but not reduced to sea-level; the wind-force by the scale 0 to 4 for Zurich; the amount of cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The elevation of Geneva is 408 meters, or 1,339 feet, and that of Zurich 470 meters, or 1,542 feet.

TURKISH SERIES.

Furnished by the coöperation of A. Coumbary, Effendi, Director of the Central Observatory at Constantinople, and of Professor C. V. A. Van Dyck, Superintendent of the Lee Observatory at Beirut.

Constantinople																			
Fao, (Persian Gulf)																			
Salonica																			
Valona																			
Varna																			
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y			29.83	757.7	75.9	24.4	39	E			1		8c			0	0	*D. clouds	Prof. C. V. A. Van Dyck.

Note.—The originals give the wind-force by the scale 0 to 7, (except Beirut, by the scale 0 to 12, and Constantinople velocity in meters per second;) the weather in general terms as published; no distinction between upper and lower clouds, and, except Constantinople and Beirut, the amount by the scale 0 to 4. It is assumed that the barometer is reduced to sea-level. * Detached clouds.

CANADIAN SERIES.

Furnished by the coöperation of Professor G. T. Kingston, Director of the Magnetic Observatory at Toronto, and Superintendent of the Meteorological Office of the Dominion of Canada, and the respective Observers. Those marked with a star (*) are also telegraphed daily to the office of the Chief Signal Officer, U. S. Army.

Bathurst, N. B			29.80	756.9	30.7	— 0.7	91	NW	7.5	3.4			0						Hon. J. Ferguson.
Brockville, Ontario			30.15	765.8	28	— 2.2		NW	1	0.4			10s		NW	0	0	Cloudy	W. R. Bigg.
*Chatham, N. B			29.77	756.1	29	— 1.7	88	N	18	8.0			10ks		N	0.09	2.3	Cloudy	G. A. Blair.
Charlottetown, P. E. Island			29.64	752.8	28	— 2.2	98	N	16	7.2			10n			0.050	1.27	Light snow	H. J. Cundall, C. E.
Cornwall, Ontario			30.10	764.5	31.4	— 0.6	89	E			1		10s			0	0	Dull	James Smith, M. A.
Dalhousie, N. B			29.88	758.9	27.4	— 2.6	81	W			1					0	0	Threatening	H. A. Johnson.
Esquimault, B. C			30.02	762.5	36.1	2.3	92	Calm				0	0			0	0	Clear	W. H. Bevis.
*Father Point, Quebec			30.01	762.2	23	— 5.0	89	N	4	1.8		5ck	2s	NW	NW	0.09	2.3	Fair	J. McWilliams.
Fredericton, N. B			29.84	757.9	31.2	— 0.4	68	NW	8	3.6			10s			0	0	Cloudy	Prof. Harrison.
*Fort Garry, Manitoba			30.72	780.3	6	—14.4	93	NE	6	2.7		0	0			0	0	Clear	James Stewart.
Goderich, Ontario			30.34	770.6	24.0	— 4.4	80	NW			2	2c	2s	W		0	0	Fine	H. J. Strang, M. A.
Granton, Ontario	29.11	739.4	30.29	769.4	21.7	— 5.7		N			1	0	0			0	0	Clear	James Grant.
*Halifax, N. S			29.56	750.8	30	— 1.1	89	N	12	5.4			10n		N	0.158	4.01	Cloudy	F. Allison, M. A.
Hamilton, Ontario			30.30	769.6	31.7	— 0.2	63	SW			1	5ck	0	NW		0	0	Fair	G. Dickson.
Heart's Content, N. F			29.25	742.9	34	1.1	89	E			1		10			0.25	6.3	Overcast	E. Weedon.
*Kingston, Ontario			30.20	767.1	29	— 1.7	93	Calm	0	0		8c	0	NW		0	0	Fair	S. Woods, M. A.
*Montreal, Quebec			30.08	764.0	30	— 1.1	72	NE	7	3.1		5ks	Haze			Inap.	Inap.	Cloudy	C. H. McLeod, C. E.
*Ottawa, Ontario			30.10	764.5	30	— 1.1	73	N	6	2.7		2cs	5ks	N	N	0	0	Fair	J. B. Haney.
*Parry Sound, Ontario			30.33	770.4	20	— 6.7	70	N	8	3.6		2k	5ks	N	N	0	0	Fair	Rev. R. Mosley.
Port Dover, Ontario			30.24	768.1	30	— 1.1	67	NW	7	3.1		10k	0	NW		0	0	Fair	H. Morgan.
Port Hastings, N. S			29.49	749.0	29.9	— 1.2		NW								0	0	Blustering	Peter Grant.
Port Stanley, Ontario			30.28	769.1	26	— 3.3	86	NW	5	2.2		2k	0	W		0	0	Clear	M. Payne.
*Quebec, Quebec			30.04	763.0	31	— 0.6	89	Calm	0	0			10n			0	0	Cloudy	Capt. Ashe, R. N.
*Rockliffe, Ontario			30.28	769.1	22	— 5.6	61	N	12	5.4		8cs	0	NE		0	0	Cloudy	
St. John, N. B			29.80	756.9	30	— 1.1	89	N	13	5.8		10ks?	0			0.03	0.8	Overcast	G. Murdoch, C. E.
*Saugeen, Ontario			30.31	769.9	21	— 6.1	85	Calm	0	0		0	0			0	0	Clear	K. Stewart.
Stayner, Ontario			30.29	769.4	22	— 5.6	81	NW	13	5.8		8k	0	NE		0	0	Cloudy	R. J. Cole.
Stratford, Ontario	28.91	734.3	30.29	769.4	20.2	— 6.6	81	NW	6	2.7		2cs	0	NW		0	0	Fine	C. J. MacGregor, M. A.
*Sydney, C. B			29.43	747.5	31	— 0.6	96	N	12	5.4			10n			0.05	1.3	Light snow	T. C. Hill.
*Toronto, Ontario			30.20	767.1	29	— 1.7	71	NW	8	3.6			10ks		N	0	0	Cloudy	Magnetic Observatory.
Woodstock, Ontario			30.28	769.1	24.1	— 4.4	87	N	7	3.1		6c	5ck	N		0	0	Cloudy	J. Montgomery.
Sub-Series.																			
St. Johns, Newfoundland			29.35	745.5	33.0	0.6	100	Calm					10n			0.08	2.0	Cloudy	John Delany.

Note.—The originals for Brockville, Charlottetown, Port Dover, Port Stanley, Stayner, St. Johns, N. F. and those telegraphed, give the amount of cloudiness by the scale 0 to 4. The elevation of Granton is 1,015 feet, or 309.4 m.; Stratford, 1,182 feet, or 360.3 m

UNITED STATES SERIES.

Furnished by the coöperation of Bvt. Brig. Gen. Albert J. Myer, Chief Signal Officer, U. S. Army.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Albany, N. Y.	.....	.....	30.03	762.7	32	0.0	89	Calm	0	0	.....	.....	10s	.....	.....	0.02	0.5	Cloudy	
Alpena, Mich.	.....	.....	30.43	772.9	19	— 7.2	54	N	2	0.9	.....	0	0	.....	.....	0	0	Clear	
Atlantic City, N. J.	.....	.....	30.08	764.0	34	1.1	69	NW	10	4.5	.....	.....	10s	.....	NW	0	0	Cloudy	
Augusta, Ga.	.....	.....	30.20	767.1	39	3.9	82	NE	5	2.2	.....	8c	0	NW	.....	0	0	Fair	
Baltimore, Md.	.....	.....	30.14	765.5	37	2.8	62	NW	6	2.7	.....	.....	10s	.....	NW	0	0	Cloudy	
Barnegat, N. J.	.....	.....	30.07	763.8	34	1.1	69	NW	16	7.2	.....	.....	10s	.....	NW	0	0	Cloudy	
Bismarck, Dakota	28.69	728.7	30.60	774.7	18	— 7.8	65	NE	2	0.9	.....	.....	10s	.....	.....	0	0	Cloudy	
Boston, Mass.	.....	.....	29.94	760.5	32	0.0	79	NW	9	4.0	.....	8cs	Haze	NW	.....	0.05	1.3	Fair	
Breckenridge, Minn.	.....	.....	30.67	779.0	12	—11.1	81	N	8	3.6	.....	.....	8s	.....	NE	0	0	Cloudy	
Buffalo, N. Y.	.....	.....	30.20	767.1	29.5	— 1.4	73	W	4	1.8	.....	10k	0	NW	.....	0	0	Cloudy	
Burlington, Vt.	.....	.....	30.08	764 0	30	— 1.1	68	N	4	1.8	.....	.....	10s	.....	.....	0	0	Cloudy	
Cairo, Ill.	.....	.....	30.39	771.9	31	— 0.6	79	NE	2	0.9	.....	.....	10s	.....	NE	0	0	Cloudy	
Cape Hatteras, N. C.	.....	.....	30.08	764.0	42	5.6	75	NE	15	6.7	.....	0	0	.....	.....	0	0	Clear	
Cape Henry, Va.	.....	.....	30.12	765.0	41	5.0	74	N	15	6.7	.....	0	0	.....	.....	0	0	Clear	
Cape Lookout, N. C.	.....	.....	30.15	765.8	43	6.1	80	NE	16	7.2	.....	0	0	.....	.....	0	0	Clear	
Cape May, N. J.	.....	.....	30.10	764.5	34	1.1	80	N	24	10.7	.....	.....	10s	.....	N	0	0	Threatening	
Charleston, S. C.	.....	.....	30.18	766.6	42	5.6	74	N	8	3.6	.....	5c	Haze	.....	.....	0	0	Fair	
Cheyenne, Wyoming	24.02	610.1	29.96	761.0	25	— 3.9	100	SE	12	5 4	.....	.....	10n	.....	.....	Inap.	Inap.	Light snow	
Chicago, Ill.	.....	.....	30.34	770.6	32	0.0	79	NE	6	2.7	.....	5k	0	E	.....	0	0	Fair	
Cincinnati, Ohio	.....	.....	30.29	769.4	34	1.1	79	NW	5	2.2	.....	0	Fog	.....	.....	0	0	Clear	
Cleveland, Ohio	.....	.....	30.30	769.6	29.5	— 1.4	89	NW	8	3.6	.....	0	8s	.....	NW	0	0	Fair	
Corsicana, Tex.	.....	.....	30.22	767.6	42	5.6	65	NE	4	1.8	.....	2cs	8s	.....	.....	0	0	Cloudy	
Davenport, Iowa	.....	.....	30.44	773.2	28	— 2.2	77	Calm	0	0	.....	5ck	0	.....	.....	0	0	Fair	
Denison, Tex.	.....	.....	30.30	769.6	37	2.8	80	NE	3	1 3	.....	5ck	0s	NE	.....	0	0	Cloudy	
Denver, Col.	24.81	630.2	30.03	762.7	31	— 0.6	89	Calm	0	0	.....	.....	10s	.....	.....	0.10	2.5	Cloudy	
Detroit, Mich.	.....	.....	30.31	769.9	25	— 3.9	75	NW	6	2.7	.....	0	0	.....	.....	0	0	Clear	
Dodge City, Kan.	27.62	701.5	30.04	763.0	31	— 0.6	89	E	6	2.7	.....	0	5s	.....	.....	0.01	0.3	Fair	
Dubuque, Iowa	.....	.....	30.47	773.9	25	— 3.9	75	NE	1	0.4	.....	10k	0	.....	.....	0	0	Cloudy	
Duluth, Minn.	.....	.....	30.57	776.5	31	— 0.6	78	NE	20	8.9	.....	.....	10s	.....	NE	0	0	Cloudy	
Eastport, Me.	.....	.....	29.79	756.7	31	— 0.6	89	N	17	7.6	.....	.....	10s	.....	W	0.13	3.3	Cloudy	
Erie, Pa.	.....	.....	30.24	768.1	30	— 1.1	78	W	6	2.7	.....	8ck	Haze	NW	.....	0	0	Fair	
Escanaba, Mich.	.....	.....	30.52	775.2	17	— 8.3	67	N	12	5.4	.....	2c	0	N	.....	0	0	Clear	
Fort Gibson, Indian Ter.	.....	.....	30.28	769.1	32	0.0	79	NW	1	0.4	.....	8cs	0	.....	.....	0	0	Fair	
Ft. St. Michael, Alaska	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Fort Sill, Indian Ter.	29.05	737.9	30.22	767.6	38	3.3	56	N	8	3.6	.....	2k	0	.....	.....	0	0	Fair	
Fort Sully, Dakota	28.70	729.0	30.52	775.2	20	— 6.7	85	SE	10	4.5	.....	8ck	0	SE	.....	0	0	Fair	
Florence, Arizona	28.31	719.1	29.82	757.4	55	12.8	.....	SW	.....	.....	.....	.....	10s	.....	SW	0.14	3.6	Cloudy	
Galveston, Tex.	.....	.....	30.16	766.1	53	11.7	60	E	12	5.4	.....	.....	10s, 1z	.....	.....	0	0	Cloudy	
Grand Haven, Mich.	.....	.....	30.40	772.1	23	— 5.0	73	NE	6	2.7	.....	0	0	.....	.....	0	0	Clear	
Indianapolis, Ind.	.....	.....	30.37	771.4	33	0.6	74	NW	3	1.3	.....	.....	10s	.....	.....	Inap.	Inap.	Cloudy	
Indianola, Tex.	.....	.....	30.13	765.3	54	12.2	73	NE	20	8.9	.....	.....	10s	.....	.....	0	0	Cloudy	
Jacksonville, Fla.	.....	.....	30.16	766.1	46	7.8	85	Calm	0	0	.....	.....	10s	.....	.....	0	0	Cloudy	
Keokuk, Iowa	.....	.....	30.34	770.6	26	— 3.3	64	N	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Key West, Fla.	.....	.....	30.01	762.2	62	16.7	88	N	4	1.8	.....	0	8ks	.....	.....	0.16	4.1	Cloudy	
Kittyhawk, N. C.	.....	.....	30.16	766.1	39	3.9	71	N	13	5.8	.....	0	0	.....	.....	0	0	Clear	
Knoxville, Tenn.	.....	.....	30.30	769.6	33	0.6	69	NW	12	5.4	.....	.....	10ks	.....	E	0	0	Cloudy	
La Crosse, Wis.	.....	.....	30.45	773.4	29	— 1.7	67	NE	3	1.3	.....	0	0	.....	.....	0	0	Clear	
Leavenworth, Kan.	.....	.....	30.43	772.9	31	— 0.6	79	N	2	0.9	.....	.....	10s	.....	.....	0	0	Cloudy	
Louisville, Ky.	.....	.....	30.33	770.4	34	1.1	79	NW	4	1.8	.....	.....	10s	.....	NW	0	0	Cloudy	
Lynchburg, Va.	.....	.....	30.17	766.3	37	2.8	63	W	5	2.2	.....	0	0	.....	.....	0	0	Clear	
Malone, N. Y.	.....	.....	30.03	762.7	32	0.0	79	Calm	0	0	.....	.....	10s	.....	.....	0.02	0.5	Cloudy	
Marquette, Mich.	.....	.....	30.51	774.9	20	— 6.7	70	NW	8	3.6	.....	0	0	.....	.....	0	0	Clear	
Memphis, Tenn.	.....	.....	30.35	770.0	31	— 0.6	79	NE	12	5.4	.....	.....	10s	.....	.....	0	0	Cloudy	
Milwaukee, Wis.	.....	.....	30.43	772.9	27	— 2.8	88	NE	12	5.4	.....	.....	8ks	.....	NE	0	0	Cloudy	
Mobile Ala.	.....	.....	30.20	767.1	42	5.6	74	N	8	3.6	.....	2k	2ks	W	.....	0	0	Fair	
Montgomery, Ala.	.....	.....	30.26	768.6	35	1.7	85	N	2	0.9	.....	10c	Sm'k	W	.....	0	0	Cloudy	
Morgantown, W. Va.	29.16	740.7	30.28	769.1	29	— 1.7	83	N	7	3.1	.....	.....	10s	.....	NW	Inap.	Inap.	Cloudy	
Mt. Washington, N. H.	23.49	596.6	29.85	758.2	17	— 8.3	100	NW	18	8.0	.....	.....	Fog	.....	.....	0	0	Foggy	
Nashville, Tenn.	.....	.....	30.34	770.9	33	0.6	79	N	4	1.8	.....	.....	10s	.....	N	0	0	Cloudy	
New Haven, Conn.	.....	.....	30.00	762.0	37	2.8	65	NW	10	4.5	.....	5c	4s	NW	NW	0.15	3.8	Cloudy	
New London, Conn.	.....	.....	29.98	761.5	36	2.2	62	NW	6	2.7	.....	5k	4s	NW	NW	0.09	2.3	Clearing	
New Orleans, La.	.....	.....	30.16	766.1	47	8.3	62	NE	8	3.6	.....	8k	0	W	.....	0	0	Fair	
Newport, R. I.	.....	.....	29.96	761.0	35	1.7	69	NW	8	3.6	.....	.....	10ks	.....	NW	0.04	1.0	Cloudy	
New York, N. Y.	.....	.....	30.06	763.5	33	0.6	69	NW	14	6 3	.....	5k	8ks	NW	NW	0.01	0.3	Cloudy	
Norfolk, Va.	.....	.....	30.15	765.8	39	3.9	67	N	4	1.8	.....	0	Haze	.....	.....	0	0	Clear	
North Platte, Neb.	27.33	694.2	30.06	763.5	27	— 2.8	88	E	6	3.6	.....	.....	10n	.....	.....	0.07	1.8	Light snow	
Omaha, Neb.	29.28	743.7	30.43	772.9	29	— 1.7	78	N	2	0.9	.....	.....	10s	.....	.....	0	0	Cloudy	
Oswego, N. Y.	.....	.....	30.17	766.3	30.5	— 0.8	94	NW	6	2.7	.....	.....	10s	.....	NW	0.01	0.3	Cloudy	
Pembina, Dakota	.....	.....	30.70	779.8	— 1	—18.3	84	NW	2	0 9	.....	0	0	.....	.....	0	0	Clear	
Philadelphia, Pa.	.....	.....	30.12	765.0	34	1.1	69	N	13	5.8	.....	.....	10ks	.....	NW	0.01	0.3	Cloudy	
Pike's Peak, Col.	17.58	446.5	29.79	756.7	9	—12.8	100	S	28	12.5	.....	.....	Fog	.....	.....	0.06	1.5	Foggy	
Pittsburgh, Pa.	.....	.....	30.24	768.1	31	— 0.6	79	N	5	2.2	.....	.....	10s	.....	N	0	0	Cloudy	
Port Huron, Mich.	.....	.....	30.31	769.9	25	— 3.9	87	NW	5	2.2	.....	.....	0	.....	.....	Inap.	Inap.	Clear	
Portland, Me.	.....	.....	29.88	758.9	34	1.1	69	N	10	4.5	.....	5k	Haz	NE	.....	0.05	1.3	Fair	
Portland, Oregon	.....	.....	30.10	764.5	40	4.4	91	Calm	0	0	.....	.....	10s	.....	.....	0	0	Cloudy	
Punta Rassa, Fla.	.....	.....	30.06	763.5	59.5	15.3	64	NE	16	7.2	.....	2cs	5s	SW	SW	0.03	0.8	Fair	
Rochester, N. Y.	.....	.....	30.17	766.3	31	— 0.6	79	NW	8	3.6	.....	.....	10s	.....	.....	0	0	Cloudy	
Salt Lake City, Utah	25.40	645.2	29.73	755.1	39	3.9	91	Calm	0	0	.....	.....	10n	.....	.....	0.01	0.3	Light rain	
Sandy Hook, N. J.	.....	.....	30.06	763.5	34	1.1	79	NW	23	10.3	.....	.....	10s	.....	NW	0.01	0.3	Cloudy	
San Diego, Cal.	.....	.....	29.88	758.9	53	11.7	86	NE	8	3.6	.....	0	5s	.....	NE	0.12	3.0	Fair	
San Francisco, Cal.	.....	.....	29.89	759.2	50	10.0	78	NW	3	1.3	.....	.....	10ks	.....	NW	0.16	4.1	Cloudy	
Santa Fé, N. M.	23.13	587.5	29.67	753.6	34	1.1	61	E	17	7.6	.....	8k	0	E	.....	0.03	0.8	Fair	
Savannah, Ga.	.....	.....	30.16	766.1	42	5.6	83	NW	6	2.7	.....	10cs	Haze	SW	.....	0	0	Cloudy	
Shreveport, La.	.....	.....	30.32	770.1	43	6.1	67	NE	8	3.6	.....	.....	10s	.....	NE	0	0	Cloudy	
Smithville, N. C.	.....	.....	30.18	766.6	36	2.2	80	N	8	3.6	.....	2c	0	W	.....	0	0	Fair	
Springfield, Mass.	.....	.....	30.00	762.0	34.5	1.4	65	N	4	1.8	.....	10ck	0	N	.....	0	0	Cloudy	
St. Louis, Mo.	.....	.....	30.39	771.9	30	— 1.1	89	NW	3	1.3	.....	0	Sm'k	.....	.....	0	0	Clear	
St. Marks, Fla.	.....	.....	30.14	765.5	44	6.7	75	N	8	3.6	.....	.....	10s	.....	.....	0	0	Cloudy	
St. Paul, Minn.	.....	.....	30.44	773.2	25	— 3.9	75	N	4	1.8	.....	2c	5s	.....	.....	0	0	Fair	
St. Paul's Island, Alaska	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Thatcher's Island, Mass.	.....	.....	29.94	760.5	33	0.6	79	N	8	3.6	.....	5k	2s	NE	NE	0.07	1.8	Fair	
Toledo, Ohio	.....	.....	30.32	770.1	27	— 2.8	77	NW	6	2.7	.....	0	Haze	.....	.....	0	0	Hazy	
Tucson, Arizona	27.39	695.7	29.94	760.5	44	6.7	.....	W	.....	.....	.....	10k	0	W	.....	0.04	1.0	Cloudy	
Tybee Island, Ga.	.....	.....	30.13	765.3	45	7.2	85	NE	16	7.2	.....	.....	Sm'k	.....	.....	0	0	Smoky	
Vicksburg, Miss.	.....	.....	30.31	769.9	37	2.8	80	NE	2	0.9	.....	2k	8s, su'	S	S, NE	0	0	Cloudy	
Virginia City, M. T.	24.18	614.2	29.66	753.4	28	— 2.2	77	NE	9	4.0	.....	5c	0	SE	.....	Inap.	Inap.	Fair	
Washington, D. C.	.....	.....	30.18	766.6	34.5	1.4	61	N	12	5.4	.....	.....	10s	.....	NW	0	0	Cloudy	
Wilmington, N. C.	.....	.....	30.17	766.3	35	1.7	80	N	5	2.2	.....	5c	0	W	.....	0	0	Fair	

UNITED STATES SERIES.—Continued.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Upper. 0—10.	Clouds. Amount. Low'r. 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Wood's Holl, Mass.	.....	.....	29.95	760.7	35	1.7	70	NW	8	3.6	.....	Haze	5s	.....	NW	0.17	4.3	Fair	
Yankton, Dakota	29.14	740.1	30.53	775.4	27	— 2.8	77	NE	2	0.9	.....	10cs	0	W	.....	0	0	Cloudy	
Yuma, Arizona	.....	.....	29.81	757.2	59	15.0	.....	S	.....	.....	.....	0	8s	.....	S	0.09	2.3	Fair	
Sub-Series.																			
Kingston, Jamaica, W. I.	.....	.....	30.19	766.8	76	24.4	72	N	6	2.7	.....	2c	2s	.....	.....	0	0	.....	James Gall.
Navassa, W. I.	.....	.....	.....	.....	78	25.6	.....	NE	.....	.....	2	.....	.....	.....	.....	0	0	.....	Dr. G. H. Davison.
Clifton, Ja., W. I.	27.20	690.9	30.00	762.0	64	17.8	78	NE	1.0	0.4	.....	0	0	.....	.....	0	0	Fine	C. Partridge.
Paramaribo, D. Guiana, S.A.	.....	.....	30.03	762.7	81	27.2	78	E	.....	.....	3	4ck	6ks	E	.....	0.300	7.62	½ cloudy	C. J. Hering.
Batavia, Dutch Guiana, S.A.	30.07	763 7	.....	.....	80 6	27	.....	N	.....	.....	.....	.....	.....	.....	.....	0.108	2.75	Cloudy	Dr. H. Groot.
Medellin, Colombia, S. A.	25.25	641.3	.....	.....	67.4	19.7	73	Calm	.....	.....	0	1cs	0	.....	.....	0	0	Fair	Thomas Herran.
York Factory, B. A.	.....	.....	30.74	780.8	3 0	—16.1	87	S	2	0.9	.....	3c	0	NW	.....	0	0	Fair	J. Fortescue, W. Wood
Honolulu, Oahu, H. I.	.....	.....	30.04	763.0	70	21.1	95	SSE	.....	.....	3	.....	.....	.....	.....	0	0	.....	Daniel Smith.
Makawao, Maui, H. I.	.....	.....	29.86	758.4	64	17.8	78	Calm	.....	.....	0	0	1k	.....	.....	0	0	.....	F. L. Clarke

Note.—The originals give the amount of cloudiness by the scale 0 to 4, except York Factory, Makawao, Medellin and Paramaribo. The elevation of the barometer at Bismarck is 1,677 feet, or 511.1 meters; Cheyenne, 6,057.3 ft., or 1,846.2 m.; Clifton, about 2,892 ft., or 881.6 m.; Denver, 5,185 ft., or 1,565.2 m.; Dodge City, 2486ft., or 757.6 m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Florence, 1,550 (?) ft., or 472.5 (?) m.; Makawao, 2,206 ft., or 672.1 m.; Morgantown, 1,027.9 ft., or 313.3 m.; Medellin, 4,876 ft., or 1,486.2 m.; Mt. Washington, 6,285 ft., or 1,915.6 m.; North Platte, 2,846 ft., or 867.4 m.; Omaha, 1,054.6 ft., or 321.4 m.; Pike's Peak, 14,150.7 ft., or 4,313.1 m.; Salt Lake City, 4,362.2 ft., or 1,329.6 m.; Santa Fé, 6,862.2 (?) ft., or 2,091.6 (?) m.; Tucson, 2,545 (?) ft., or 775.7 (?) m.; Virginia City, 5,480 (?) ft., or 1,670.3 (?) m.; Yankton, 1,278 ft., or 389.5 m. The following constants are added in correcting the barometric observations for altitude: Cheyenne, 5.04 inches; Denver, 5.22 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fé, 6.54 in.; Tucson, 2.59 in.; Virginia City, 5.48 in. The elevation of Batavia is about feet; the barometric readings need the addition of 0.2 mm. or 0.01 in. for reduction to sea-level.

UNITED STATES NAVAL SERIES.

By authority of the **SECRETARY OF THE NAVY.**

Furnished by the coöperation of the Navy Department, through Commodore Daniel Ammen, U. S. N., Chief of Bureau of Navigation.

STATIONS AND VESSELS.	True course toward—	Hourly rate in knots.	*Barometer as reported.		Temperature of the Air.		Relative Humidity.	Wind.				Clouds.				Rain-fall or melted snow in the past 24 hours.		State of Ocean.	Direction of swell from—	Weather.	OBSERVER.
								Direction.	Velocity		Force.	Amount.		Direction.							
												Up'er	Low'r	Up'er	Low'r						
			Inches.	Millimeters.	Fahrenheit.	Centigrade.	Per cent.	From—	Miles per hour.	Meters per second.	0—10.	0—10.	0—10.	From—	From—	Inches.	Millimeters.				
Naval Academy, Annapolis, Md.			29.76	755.9	36	2.2	70	NNW			3		10			0	0			Cloudy	
Naval Hospital, Annapolis, Md.			30.15	765.8	35	1.7	63	N			2		9		N	0	0			Cloudy	
Navy Yard, Mare Island, Cal.			29.97	761.2	47	8.3		WNW			1		2			0.081	2.06			Clear	
Navy Yard, Norfolk, Va.			30.24†	768.1†	41	5.0	65	NW	4	1.8			0			0	0			Blue sky	
Navy Yard, Pensacola, Fla.			30.22	767.6	43	6.1	75	N	9	4.0			6		NE	0	0			‡D. clouds	
Navy Yard, Portsmouth, N.H.			29.88	758.9	31	— 0.6		W	4	1.8					S	0.01	0.3			Fine	
¶ Canonicus, New Orleans, La.			30.08	764.0	47	8.3	92	NE			3		10		E					Cloudy	
Colorado, New York, N. Y.			30.10	764.5	36	2.2		NW	16	7.2			9		S&E	0.02	0.5			‡D. clouds	
Essex, Vera Cruz, Mex.			30.00	762.0	70	21.1	100	NW			2		5		N			Smooth		‡D. clouds	
¶ Gettysburg, Oneglia, Italy.			29.76	755.9	65	18.3		E			2		3					Light	SSW	‡D. clouds	
Hartford, Hampton Roads, Va.			30.25	768.3	40	4.4		WNW			1		0			0	0			Pleasant	
Huron, Charleston, S. C.			30.23	767.8	46	7.8	84	NNE			3		8		S&E					Hazy	
Lackawana, Mare Island, Cal.			29.90	759.4	54	12.2	80	WNW			1		7		E			Smooth		‡D. clouds	
Marion, Port Said, Egypt.			29.82	757.4	80	26.7	82	SSE			2		9		N			Smooth		‡D. clouds	
Michigan, Erie, Pa.			29.74	755.4	30	— 1.1	78	NW			2		10		NW					Cloudy	
Monongahela, Baltimore, Md.			30.17	766.3	38	3.5		WNW			2		..k,n							‡D. clouds	
New Hampshire, Port Royal, S. C.			30.30	769.6	44	6.7		NE			2		7		E					‡D. clouds	
Omaha, Panama.			30.10	764.5	74	23.3	93	Calm			0		1			0	0	Smooth		Hazy	
Ossipee, Pensacola, Fla.			30.19	766.8	44	6.7		NNE			2		5		SW					‡D. clouds	
Pensacola, Panama.			30.08	764.0	75	23.9	95	Calm			0		0			0	0			Pleasant	
Plymouth, New Orleans, La.			30.18	766.6	48	8.9	78	NNE			4		8		W					Cloudy	
Ranger, Hampton Roads, Va.			30.24	768.1	39.5	4.1		NNW			2		0					Smooth		Hazy	
Richmond, Montevideo, Uruguay.			30.17	766.3	70.0	21.1	90	ESE			1		8							‡D. clouds	
¶ Rio Bravo, Matamoras, Mex.			29.90	759.4	55	12.8		NE			1		4		S					‡D. clouds	
Santee, Annapolis, Md.			30.21	767.3	38	3.3	72	NNW			3		10							Cloudy	
St. Louis, League Island, Pa.			29.98	761.5	35	1.7		NW	4	1.8			10		NW	0	0			Overcast	
Vandalia, Constantinople, Turkey.			29.60	751.8	53	11.7	100	NE			1		10		SW					‡D. clouds	
Wabash, Boston, Mass.			29.98	761.5	34	1.1		NW	5	2.2			5		SE	0.68	2.0			Hazy	
Wyoming, Washington, D. C.			30.38†	771.6†	36	2.2		NNE			2		9		NW						

* It is not known that the barometer is corrected for temperature, instrumental error or elevation. † Aneroid Barometer. ‡ Detached clouds. ¶ Barometer corr instrumental error and reduced to sea-level.

UNITED STATES MARINE SERIES

REPORTED TO THE OFFICE OF THE CHIEF SIGNAL OFFICER OF THE ARMY.

NAMES OF VESSELS.	TRUE COURSE TOWARD—	HOURLY RATE IN KNOTS.	BAROMETER REDUCED TO SEA-LEVEL.		TEMPERATURE OF THE AIR.		RELATIVE HUMIDITY.	WIND.				CLOUDS.				STATE OF OCEAN.	DIRECTION OF SWELL FROM—	WEATHER.	OBSERVER
								Direction.	Velocity.		Force.	Amount.		Direction.					
												Up'er	Low'r	Upper.	Lower.				
			Inches.	Millimeters.	Fahrenheit.	Centigrade.	Per cent.	From—	Miles per hour.	Meters per second.	0—10.	0—10.	0—10.	From—	From—				
PACIFIC MAIL S. S. CO. MARINE SERIES. Furnished by the coöperation of ————, President; Williams, Blanchard & Co., Agents.																			
S. S. City of Peking																			Lt. Z. L. Tanner, U.S.N
OCCIDENTAL AND ORIENTAL S. S. CO. MARINE SERIES. Furnished by the coöperation of George H. Bradbury, President; T. H. Goodman, Agent.																			
S. S. Belgic																			Capt. John Metcalf.
S. S. Gaelic																			Capt. W. H. Kidley
S. S. Oceanic																			Capt. H. Parsell.
NORTH GERMAN LLOYD OF BREMEN MARINE SERIES. Furnished by the coöperation of A. Schumacher & Co., Agents.																			
S. S. Baltimore																			Capt. H. Andressen.
S. S. Berlin																			Capt. C. Pohle.
S. S. Braunschweig																			Capt. K. Undütsch.
S. S. Nürnberg																			Capt. A. Jaeger.
S. S. Ohio																			Capt. G. Meyer.
MARINE SERIES. (Miscellaneous.) Furnished by the coöperation of the Observer named.																			
Schooner Addie Fuller, off Fire Island	ENE	5	29.96	761.0	36	2.2	90	NW	11	4.9	.....	0	2s	.....	.....	Short sea.	.....	Clear	Capt. James Jorgensen

NOTE.—The schooner Addie Fuller gives the amount of cloudiness by the scale 0 to 4.

COLLATED AT THE OFFICE OF THE CHIEF SIGNAL OFFICER OF THE ARMY, WASHINGTON, D. C.

The records which appear in this Bulletin are copied from the regular exchanges of this office, made in each instance in compliance with an especial request and are published for the uses of the coöperating observers. The barometric readings in the first two columns are reduced to freezing and their respective standards; those in the second two also to mean sea-level. The "weather" is generally published as given.

When the distinction between the upper and lower strata of clouds is not reported, the *kinds* or *types*, viz: cirrus, cumulus, stratus, nimbus, scud, fracto, pallio, haze, fog and smoke, as indicated, respectively, by the letters c, k, s, n, d, f, p, hz., fg. and sm'e, are generally published with the amount in the lower-cloud column. The distinction between the upper and lower strata is carefully made in the United States Series and a portion of the Canadian Series, and the types are indicated by the above letters or their combinations in the proper column.

Albert J. Myer

Brig. Gen. (Bvt. Assg^d.) Chief Signal Officer, U. S. A.

BULLETIN

OF

INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON FEBRUARY 27, 1877.

7:35 A. M. WASHINGTON mean time.

6:7 A. M. MEXICO mean time.
7:7 A. M. SAN JOSE mean time.
0:6 P. M. LISBON mean time.
0:28 P. M. MADRID mean time.
0:43 P. M. GREENWICH mean time.
0:53 P. M. PARIS mean time.
1:1 P. M. BRUSSELS mean time.
1:4 P. M. UTRECHT mean time.
1:13 P. M. BERNE mean time.
1:26 P. M. CHRISTIANIA mean time.

1:33 P. M. COPENHAGEN mean time.
1:33 P. M. ROME mean time.
1:37 P. M. BERLIN mean time.
1:49 P. M. VIENNA mean time.
1:55 P. M. STOCKHOLM mean time.
2:18 P. M. ATHENS mean time.
2:39 P. M. CONSTANTINOPLE mean time.
2:44 P. M. ST. PETERSBURG mean time.
6:36 P. M. CALCUTTA mean time.
10:2 P. M. TOKEI mean time.

ALGERIAN SERIES.

Furnished by the coöperation of General d'Eudeville, Commandant Supérieur du Génie in Algeria.

STATIONS.	Barometer: Corrected for instrum'tal error and temperature. Inches.	Barometer: Corrected for instrum'tal error and temperature. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Nemours	.....	.....	30.17	766.4	64.8	18.2	.....	SSE	.....	.....	2	.....	2	.....	.....	0	0	Clear.....	Michel.
Algiers	.....	.....	30.09	764.3	63.1	17 3	.....	SW	.....	.....	3	.....	1	.....	.....	0	0	Clear	Biscarrat.
La Calle	.....	.....	30.04	762.9	55.8	13.2	.....	NW	.....	.....	3	.....	4	.....	.....	0.079	2 0	Fair	Fleury.
Tunis	.....	.....	30.04	763.1	57.4	14.1	.....	W	.....	.....	5	.....	6	.....	.....	0.039	1.0	Fair	Jacques.
Sfax	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Saida	.....	.....	30.13	765.2	54.0	12.2	.....	NNW	.....	.....	2	.....	3	.....	.....	0	0	Fair	Millot.
Tebessa	.....	.....	30.10	764.4	46.9	8.3	.....	NW	.....	.....	2	.....	2	.....	.....	0	0	Clear.....	Bourgeois.
Geriville	.....	.....	30.09	764.3	48.3	6.3	.....	N	.....	.....	3	.....	0	.....	.....	0	0	Clear	Lemaillot.
Laghouat	.....	.....	30.11	764.8	50.2	10.1	.....	N	.....	.....	1	.....	1	.....	.....	0	0	Clear	Guyot.
Biskra	.....	.....	30.13	765.2	63.1	17.3	.....	NW	.....	.....	3	.....	6	.....	.....	0	0	Cloudy	Kunts.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—In the originals the distinction between the amount of upper and lower clouds is apparently not made. The weather is published as given. The rain-fall is measured at a. m., local time.

AUSTRIAN SERIES.

Furnished by the cooperation of Professor Dr. Julius Hann, Director of the Imperial and Royal Central Meteorological Institute at Vienna.

STATIONS.	Barometer: Corrected for instrum'tal error and temperature. Inches.	Barometer: Corrected for instrum'tal error and temperature. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Agram	.....	.....	29.73	755.1	35.2	1.8	94	SW	.....	.....	2	.....	10	.....	.....	0.406	10.3	.....	Prof. Ivan Stoxir.
Cracow, I. R. Observatory	.....	.....	29.58	751.4	34.2	1.2	75	W	.....	.....	3	.....	7	.....	.....	0	0	.....	Dr. Wierzbiski.
Eperies	.....	.....	29.56	750.7	36.7	2.6	55	N	.....	.....	3	.....	10s	.....	.....	0	0	.....	Julius Mikolik.
Gratz	28.44	722.3	29.72	754.8	39.9	4.4	42	NW	.....	.....	5	.....	10	.....	.....	0	0	.....	Andreas Rospini.
Hermannstadt	28.02	711.6	29.43	747 5	45.5	7.5	61	NW	.....	.....	5	.....	6	.....	.....	0	0	.....	Prof. Reissenberger.
Kremsmünster	28.35	720.2	29.75	755.6	31.3	— 0.4	96	W	.....	.....	5	.....	10	.....	.....	0.106	2.7	.....	Prof. C. Wagner.
Lemberg	.....	.....	29.49	749.0	35.2	1.8	62	NW	.....	.....	2	.....	6	.....	.....	0	0	.....	Dr. T. Stanecki.
Nylregyhaza	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Habzsuda Daniel.
Pola	.....	.....	29.67	753.7	33.8	1.0	94	NNE	.....	.....	1	.....	10s	.....	.....	0.307	7.81	.....	I.R.Hydrographic Office
Szegedin	.....	.....	29.58	751.3	41.4	5.2	45	N	.....	.....	2	.....	10	.....	.....	0	0	.....	Karl Stancel.
Trieste	.....	.....	29.65	753.1	40.3	4.6	68	ENE	.....	.....	3	.....	10	.....	.....	1.079	27.4	Raining.....	Prof. V. Farolfi.
Vienna	.....	.....	29.67	753.7	35.4	1.9	73	NW	.....	.....	2	.....	10	.....	.....	0.047	1.2	.....	I. R. Central Met. Obs'y.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
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.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 7 p. m., local time. The elevation of Gratz is 343.5 meters, or 1,126.9 feet; Hermannstadt, 407.8 meters, or 1,337.9 feet; Kremsmünster, 383.6 meters, or 1,258.5 feet.

BELGIAN SERIES.

Furnished by the cooperation of J. C. Houzeau, Director of the Royal Observatory at Brussels.

STATIONS.	Barometer: Corrected for instrum'tal error and temperature. Inches.	Barometer: Corrected for instrum'tal error and temperature. Millimeters.	Barometer: Reduced to sea-level. Inches.	Barometer: Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Arlon	.....	.....	29.84	758.0	33.3	0.7	86	WSW	.....	.....	4	.....	9	.....	.....	0.102	2 6	.....	Royal Observatory.
Brussels	.....	.....	29.67	753.5	38.8	3.8	75	WSW	.....	.....	7	..k	10n	W	WSW	0.152	3.85	Snowing.....	
Furnes	.....	.....	29.73	755.1	39.9	4.4	89	NW	.....	.....	6	.....	4	.....	.....	0	0	.....	
Maeseyck	.....	.....	29.64	752.9	38.5	3.6	80	SW	.....	.....	10	.....	5	.....	.....	0.059	1.5	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—In the originals, the weather is occasionally given in general notes.

BRITISH SERIES

Furnished by the coöperation of Robert H. Scott, Esq., Director of the Meteorological Office, London, Alexander Buchan, Secretary of the Scottish Meteorological Society, Edinburgh, and the respective Observers.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Aberdeen			29.76	755.9	26.0	— 3.3		NW	28	12.5			6			0.050	1.27	Squally	William Boswell.
Ardrossan			29.92	760.0	32	0.0		NW			5		4					*D. clouds	William McNeil.
Armagh, Observatory			30.06	763.5	34.1	1.2		NW	11	4.9			7					*D. clouds	S. Call, for Dr. Robinson.
Bidston (Liverpool Obs.)			29.90	759.4	35.0	1.7		NW	29	13.0			2					Blue sky	John Hartnup.
Birr Castle, (Parsonstown)			30.09	764.5	40.3	4.6		NW			1		7					*D. clouds	J. Dreyer.
Bradford			29.87	758.7	31.1	— 0.5		W			2		3			0	0	*D. clouds	J. McLandsborough.
Bridgetown, (Barbados)			30.01	762.2	82	27.8		NE			1		4					*D. clouds	Sergt. J. F. Halanen, A.
Cambridge, Observatory			29.85	758.2	36.2	2.3		NW			4		1			Blank	Blank	*D. clouds	H. Todd. [H.C.
Cardington			29.87	758.7	34.0	1.1		NW			4		7					Overcast	John McLaren.
Carlisle																			T. Bell, for J. Cartmell.
Chatham, School M. E.			29.89	759.2	37.2	2.9		NE			5		8					Blue sky	Maj. C. N. Martin, R.E.
Dartmoor	28.50	723.9	30.04	763.0	39.0	3.9		N			5		6					*D. clouds	R. E. Power.
Davos Platz, (Switzerland)	24.56	623.8			23.5	— 4.7	37	NE			2		3			0.099	2.51	*D. clouds	Francis Redford, M. A.
Donaghadee			29.98	761.5	35	1.7		NW			6		10					Snowing	J. Mac Gowan.
Dover			29.79	756.7	37	2.8		WNW			4		7					¾ clouded	J. Costello.
Eccles, (near Manchester)			29.89	759.2	33.4	0.8		NNW	2.2	1.0			2					*D. clouds	Thomas Mackereth.
Falmouth, Observatory			30.04	763.0	44.6	7.0		NW			4		4					*D. clouds	The Staff.
Fort Napier, (Natal)	27.71	703.8	29.94	760.5	69.4	20.8		E			1		10					Overcast	P'vt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.93	760.2	88	31.1		N			2		4					*D. clouds	
Galway, Queen's College			30.05	763.3	41	5.0		NW			1		5					*D. clouds	Prof. A. H. Curtis.
Gibraltar, (Mediterranean)			30.16	766.1	61.9	16.6		NW			4		1					Blue sky	Corpl. C. Aitken, A.H.C.
Glasgow, Observatory			29.89	759.2	29.8	— 1.2		NW			2		3					*D. clouds	Lewis Stuart.
Great Yarmouth			29.72	754.9	31	— 0.6		NW			5		6					Snowing	G. T. Watson.
Greenwich, Royal Obs'y			29.86	758.4	38.0	3.3		NNW			6		2			Blank	Blank	*D. clouds	The Staff, for G. B. Airy.
Guernsey			29.96	761.0	46	7.8		WNW			6		5					Rain & hail	Dr. S. E. Hoskins.
Helston			30.02	762.5	46	7.8		NW			6		4c			Blank	Blank	*D. clouds	M. P. Moyle.
Holyhead			29.95	760.7	35	1.7		NNW			6		3					*D. clouds	John Tilston.
Kew, Observatory			29.87	758.7	38.5	3.6		NNW	20	8.9			4					*D. clouds	The Staff.
Kingstown			30.02	762.5	37	2.8		NW			6		6					*D. clouds	George Mitchell.
Leicester Museum			29.88	758.9	31.8	— 0.1		N			2		10					Overcast	Wm. J. Harrison, F.G.S.
Malta, (Mediterranean)			29.88	758.9	56.2	13.4		NW			2		8k					*D. clouds	Corp'l. P. Bravis, A.H.C.
Nairn			29.85	758.2	27	— 2.8		WNW			6		8					¾ clouded	W. D. Penny.
Nassau, (Bahamas)			30.06	763.5	74.0	23.3		NE			1		8					Overcast	Surg. Maj. Henry.
Nottingham, Observatory			29.89	759.2	32.3	0.2		NW			4		1k		NW	0.049	1.24	Blue sky	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			29.90	759.4	30.9	— 0.6		NW			2		10					Overcast	Rev. Stephen Whitty.
Oxford, Radcliffe Obs'y			29.89	759.2	38	3.3		NW			4		10			Blank	Blank	Overcast	J. Lucas.
Plymouth			29.98	761.5	46.5	8.1		WNW			3		3					Showery	John Merrifield.
Roche's Point			30.08	764.0	40	4.4		NNW			4		5			Blank	Blank	Cloudy	W. Kennedy.
Saint Ann's Head			30.01	762.2	40	4.4		NNW			4		5						John C. Walker.
Saint Helier, (Jersey)			29.98	761.5	47.8	8.8		W			6		8					¾ clouded	A. P. Amy.
Sandwick Manse, (Orkneys)			29.75	755.6	23.2	— 4.9		NW	50	22.4			10					Snowing	Rev. C. Clouston, LL. D.
Scarborough																			F. Shaw.
Scutari Cemetery, (Turkey)			29.57	751.1	52.6	11.4		SW			1		3					*D. clouds	Sergt. W. H. Lyne.
Sheffield			29.87	758.7	32.2	0.1		N			3		2			0	0	Blue sky	W. F. Cooper.
Silloth Rectory			29.91	759.7	35.6	2.0	52	NW			3		0			0	0	Blue sky	Rev. Francis Redford
Stonyhurst, Observatory			29.89	759.2	30.3	— 0.9		NW			2							Blue sky	Rev. S. J. Perry.
Stornoway, Lewis C., (Hebr.)			29.92	760.0	26	— 3.3		N			6		10					Snowing	John Smith.
Stratfield Turgiss			29.88	758.9	38.9	3.8		NW			3		5					Squally	Rev. Charles H. Griffith.
Thurso			29.75	755.6	27	— 2.8		NNW			6		10					Snowing	John Trotter.
Truro, Royal Institution			30.04	763.0	48	8.9		N			6		6					*D. clouds	W. Newcombe.
Valencia, Observatory			30.10	764.5	44.3	6.8		NNW	8	3.6			4					*D. clouds	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man)																			Henry Mercer.
Cape Good Hope, Obs'y			29.90	759.4	86.6	30.3	66	SSE	7	3.1		0	0						The Staff, for E. J. Stone.
Hobart Town, (Tasmania)			29.84	757.9	69.0	20.6	88	SE			2		10n			0.27	6.9	Hazy	Francis Abbott, F.R.A.S.
Leith, Restalrig Park			29.90	759.4	31.1	— 0.5		NW			3		4k			0.03	0.8	Fine	Andrew Gibb.
Mauritius, Observatory			30.00	762.0	77.4	25.2	82	NE	7.9	3.5		10	1		NE	0.01	0.3	Gloomy	C. Meldrum.
Melbourne, Observatory			29.86	758.4	65.1	18.4	87	Calm	0	0			8		NW	0	0	Very sultry	R. L. J. Ellery.
Monach L't-house, (Hebrides)																			J. Youngclause.
North Unst, (Shetland Is.)																			Robert Burnet.

Note.—Generally, the originals do not give the relative humidity, rain-fall, or distinction between upper and lower clouds. The originals give the wind direction to 32 points and weather by the Beaufort notation. The originals give the barometer for Aberdeen, Cardington, Freetown, Galway, Oxford, St. Helier, Sandwick, Scarborough, Stonyhurst, Leith, Monach and North Unst as read off and the amount of cloudiness for Stornoway by the scale 0 to 4. The wind-force is given by the scale 0 to 12 in the official series; 0 to 6 in the sub-series; except in lbs. per square foot for Greenwich and Hobart Town. The rain-fall is measured at Aberdeen at 10 a. m.; Bradford, 9 a. m.; Hobart Town, 7:30 a. m.; Nottingham, 6 p. m.; Mauritius, 9 a. m., local time. The elevation of Dartmoor is 1,400 feet, or 426.7 meters; Davos Platz, 5,1052 feet, or 1,555.09 meters; Fort Napier, 2,200 feet, or 670.6 meters. *Detached clouds.

By authority of the Minister of Foreign Affairs.

COSTA RICA SERIES.

Furnished by the coöperation of Senor Federico Maison, Director of the Central Office of Statistics and Meteorology.

San José																			

DANISH SERIES.

Furnished by the coöperation of Captain N. Hoffmeyer, Director of the Royal Danish Meteorological Institute at Copenhagen.

Copenhagen			29.25	742.9	27.1	— 2.7	81	E			2		10						
Fanöe			29.37	745.9	31.1	— 0.5	94	NW			6		9						
Godthaab, (Greenland)			29.20	741.7	16.6	— 8.6		N			4		10					Snowing	
Stykkisholm, (Iceland)			30.21	767.2	7.3	—13.7	92	E			6		5						
Thorshavn, (Faröe)			29.97	761.1	19.8	— 6.8	78	N			5		5					Snowing	
Vestervig			29.23	742.5	29.1	— 1.6	88	NW			7		10						

Note.—The originals give the wind-force by the scale 0 to 6; occasionally, weather by Vienna symbols; no distinction between the amount of upper and lower clouds.

FRENCH SERIES.

Furnished by the cooperation of His Excellency, U. J. Le Verrier, Director of the Paris Observatory, and the respective Observers.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'r 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Alençon	.....	.....	30.02	762.4	46.4	8	97	NW	.....	.....	2	.....	5k	.....	NW	0	0	Cloudy	Normal School.
Amiens	.....	.....	29.83	757.7	39.9	4.4	90	SW	.....	.....	3	.....	5	.....	SW	0.094	2.4	Cloudy	Normal School.
Avignon	.....	.....	29.99	761.8	48.2	9	36	NNW	.....	.....	2	.....	2	.....	NNW	0.047	1.2	Slightly cl'dy	Normal School.
Bar-sur-Seine	.....	.....	29.94	760.5	42.1	5.6	63	W	.....	.....	3	.....	8kn	.....	NW	0.193	4.9	Very cloudy	C. Saillard.
Beaumette, (near Angers)	.....	.....	30.00	762.1	46.8	8.2	48	NW	8.9	4.0	.....	.....	.....	.....	W	0	0	.....	Beaumette Observ'tory.
Beauvais	.....	.....	29.88	758.9	43.7	6.5	62	W	.....	.....	6	.....	8	.....	WNW	0.217	5.50	Very cloudy	Normal School.
Besançon	.....	.....	30.03	762.8	40.3	4.6	59	SSW	.....	.....	3	.....	5	.....	SW	0.307	7.8	Cloudy	Normal School.
Bourg en Bresse	.....	.....	30.10	764.4	41.0	5	69	N	.....	.....	4	.....	5k	.....	NW	0.142	3.6	Cloudy	Normal School.
Bourges	.....	.....	30.04	763.0	43.7	6.5	77	SSW	.....	.....	6	.....	5	.....	W	0.16	4.	Cloudy	Normal School.
Brest	.....	.....	30.01	762.3	51.6	10.9	56	W	.....	.....	4	.....	6	.....	W	0	0	.....	Naval Observatory.
Carcassonne	.....	.....	30.09	764.2	50.4	10.2	46	W	.....	.....	1	.....	0	.....	.....	0.138	3.5	Clear	Normal School.
Caen	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Chartres	.....	.....	29.99	761.7	43.7	6.5	97	WNW	.....	.....	2	.....	8	.....	SE	0	0	.....	Normal School.
Châlons-sur-Marne	.....	.....	29.88	758.9	43.2	6.2	56	NW	.....	.....	6	.....	8kn	.....	SE	0.161	4.1	Very cloudy	Normal School.
Clermont	.....	.....	30.05	763.3	45.3	7.4	48	WSW	.....	.....	3	.....	5	.....	WNW	0.209	5.3	.....	Puy de Dome Obs'y.
Commercy	.....	.....	29.95	760.7	36.5	2.5	85	W	.....	.....	8	.....	10	.....	.....	0.177	4.5	Covered	Normal School.
Commune de Gréasque*	.....	.....	29.92	760.0	44.2	6.8	31	NW	.....	.....	8	.....	0	.....	.....	0	0	.....	M. Kina.
Grenoble	.....	.....	30.07	763.7	41.5	5.3	62	NW	.....	.....	8	.....	2k	.....	SE	0.345	8.76	Slightly cl'dy	Normal School.
La Roche-sur-Yon	.....	.....	30.10	764.4	48.6	9.2	50	W	.....	.....	2	.....	8	.....	E	0.094	2.4	Very cloudy	Normal School.
Le Mans	.....	.....	30.03	762.8	41.4	5.2	78	W	.....	.....	2	.....	8	.....	W	0.108	2.75	Very cloudy	Normal School.
Lons-Le-Saulnier	.....	.....	30.04	763.0	40.8	4.9	76	SW	.....	.....	4	.....	2	.....	SE	0.185	4 70	Raining	Normal School.
Lorient	.....	.....	30.09	764.3	49.6	9.8	42	W	.....	.....	3	.....	2	.....	W	0.020	0.5	Slightly cl'dy	Naval Observatory.
Mâcon	.....	.....	29.99	761.7	40.3	4.6	69	W	.....	.....	2	.....	10	.....	.....	0	0	Covered	Normal School.
Metz	.....	.....	29.91	759.8	35.1	1.7	94	SW	.....	.....	4	.....	10	.....	.....	0.217	5.5	Snowing	M. Schuster.
Mirecourt	.....	.....	29.91	759.6	36.3	2.4	75	SW	.....	.....	4	.....	10	.....	NE	0.142	3.6	Covered	Normal School.
Nismes	.....	.....	29.99	761.8	51.8	11	56	N	.....	.....	2	.....	.....	.....	.....	0	0	.....	Normal School.
Orleans	.....	.....	29.96	761.0	42.4	5.8	78	SW	.....	.....	2	.....	5	.....	SW	0	0	Cloudy	Normal School.
Paris, Observatory	.....	.....	29.89	759.1	42.4	5.8	63	W	.....	.....	3	.....	8k	.....	W	0.038	0.97	Very cloudy	National Observatory.
Parthenay	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Privas	.....	.....	30.05	763.3	40.6	4.8	42	N	.....	.....	4	.....	2	.....	N	0	0	Slightly cl'dy	Normal School.
Rochefort, Observatory	.....	.....	30.13	765.3	51.1	10.6	56	W	.....	.....	3	.....	1	.....	E	0	0	Clear	Naval Observatory.
Rouen	.....	.....	29.90	759.4	45.5	7.5	77	NW	.....	.....	6	.....	5	.....	W	0.177	4.5	Cloudy	Normal School.
Saint Lo	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Tarbes	28.99	736.4	30.10	764.4	48.2	9	92	WNW	.....	.....	2	.....	0	.....	.....	0.31	8.	Clear	Normal School.
Villefranche	.....	.....	30.11	764.7	43.7	6.5	70	NW	.....	.....	1	.....	5	.....	W	0	0	Cloudy	Normal School.
Sub-Series.																			
Fort de France, Martinique	.....	.....	29.91	759.6	78.8	26	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	L'Abbé Marchési.
Marseilles	.....	.....	29.98	759.0	48.0	8.9	55	NW	.....	.....	7	.....	.....	.....	.....	0	0	Clear	Marseilles Observatory.
Mont-Louis	24.76	629.0	30.08	764.0	35.2	1.8	43	WSW	14.9	6.66	.....	.....	2	.....	W	0	0	.....	—. Falguère.
Montsouris, Paris	.....	.....	29.91	759.8	43.7	6.5	72	W	.....	.....	3	.....	7	.....	WNW	0.037	0.9	.....	Montsouris Observatory
Perpignan	.....	.....	30.06	763.5	49.6	9.8	52	NW	22.4	10.00	.....	.....	3	.....	WNW	0	0	.....	Dr. Flues.
Pic du Midi, (Summit,) H. P.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. Baylac.
Pic du Midi, (Plantade,) H. P.	22.39	568.6	.....	.....	21.2	— 6.0	.....	NW	.....	.....	4	.....	5	.....	.....	0.717	18.2	Snowy	General de Nansouty.
Saint Maur, (near Paris)	.....	.....	29.92	759.9	45.0	7.2	68	W	.....	.....	3	.....	5	.....	.....	0.039	1.0	Very cloudy	E. Renou.
Toulouse	.....	.....	30.15	765.8	44.8	7.1	47	NNW	.....	.....	3	.....	1	.....	.....	0.158	3.9	.....	Toulouse Observatory.
Tours	.....	.....	.....	.....	44.8	7.1	.....	WNW	.....	.....	3	.....	5	.....	W	0.051	1.3	.....	C. Marquet.
Versailles, (near Paris)	.....	.....	29.92	760.0	42.1	5.6	78	W	.....	.....	2	.....	7	.....	.....	0.057	1.44	Showery	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai)	.....	.....	30.42	772.6	36.7	2.6	79	ESE	0.9	0.4	.....	.....	2	.....	.....	0	0	.....	Marc Dechevrens, S. J.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE.—Generally, the originals give the wind-force by the scale 0 to 7; no distinction between upper and lower clouds is made, and, in the official series, the amount by the scale 0 to 4; the rain-fall as measured at 7, 8 or 9 a. m., local time; at Clermont, 9 a. m. of the following day; the weather in general terms as published. The elevation of Clermont is 388 meters, or 1,272.9 feet; Commune de Gréasque, 322 meters, or 1,056.4 feet; Tarbes, 308 meters, or 1,010 feet; Mont-Louis, 1,589.40 meters, or 5,214.8 feet; Pic du Midi, (Summit,) 2,877 meters, or 9,439.1 feet; Pic du Midi, (Plantade,) 2,366 meters, or 7,762.6 feet. In correcting the Mont-Louis barometric observations for altitude, the constant 135. millimeters has been added. *Bouches-du-Rhône

GERMAN SERIES.

Furnished by the coöperation of Professor Dr. G. Neumayer, Director of the German Naval Observatory, Hamburg.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'r 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Bamberg	.....	.....	29.71	754.6	35.1	1.7	40	NW	.....	.....	6	.....	4	WNW	.....	0.079	2.0	.....	Prof. T. Hoh.
Berlin	.....	.....	29.54	750.3	36.1	2.3	63	NW	.....	.....	4	.....	8	.....	.....	0.091	2.3	.....	Prof. Arndt.
Breslau	.....	.....	29.55	750.5	33.8	1.0	55	W	.....	.....	6	.....	4	.....	.....	0	0	.....	Royal University Obs'y.
Carlsruhe	.....	.....	29.83	757.7	34.2	1.2	92	SW	.....	.....	3	.....	10	.....	.....	0.165	4.2	.....	A. Senz.
Cassel	.....	.....	29.55	750.5	37.2	2.9	57	W	.....	.....	6	.....	6	WNW	.....	0.094	2.4	Snowing	Dr. H. Möhl.
Crefeld	.....	.....	29.57	751.0	40.6	4.8	61	SW	.....	.....	5	.....	6	.....	.....	0.20	5.	.....	Director Lose.
Emden	.....	.....	29.58	751.4	29.5	— 1.4	98	NNW	.....	.....	3	.....	10	.....	.....	0.091	2.3	.....	Prof. Prestel.
Frankfort on the Main	.....	.....	29.80	756.9	39.2	4.0	48	WSW	.....	.....	4	.....	3	.....	.....	0.122	3.1	.....	Physical Society.
Friedrichshafen	28.46	722.9	29.95	760.6	36.1	2.3	71	W	.....	.....	8	.....	10	.....	.....	0.075	1.9	Snowing	M. Wilhelm.
Hamburg	.....	.....	29.50	749.3	30.9	— 0.6	88	W	.....	.....	5	.....	9ks	.....	.....	0.059	1.5	.....	Captain F. Hegemann.
Kiel	.....	.....	29.39	746.6	31.6	— 0.2	95	W	.....	.....	5	.....	7	.....	.....	0.012	0.3	.....	Prof. G. Karsten
Königsberg, (Prussia)	.....	.....	29.20	741.6	31.1	— 0.5	75	SW	.....	.....	5	.....	5	.....	.....	0.008	0.2	Snowing	Prof. E. Luther.
Köslin	.....	.....	29.32	744.8	33.1	— 0.6	.....	W	.....	.....	5	.....	10	.....	.....	0	0	.....	H. Müller.
Leipsic	.....	.....	29.65	753.1	35.2	1.8	62	WSW	.....	.....	6	.....	7	WSW	.....	0.154	3.9	.....	Prof. Bruhns.
Memel	.....	.....	29.21	741.8	27.0	— 2.8	79	W	.....	.....	3	.....	10ks	W	.....	0.028	0.7	Snow-squall.	Reinbrecht & Skalweit.
Münster	.....	.....	29.47	748.5	35.6	2.0	78	NW	.....	.....	2	.....	10	.....	.....	0.138	3.5	.....	Prof. E. Heis.
Neufahrwasser	.....	.....	29.24	742.6	32.0	0.0	85	WNW	.....	.....	4	.....	7	.....	.....	0.079	2.0	.....	A Lothe.
Posen	.....	.....	29.46	748.2	33.4	0.8	90	WNW	.....	.....	8	.....	3	.....	.....	0	0	.....	Dr. Magener.
Strassburg, (in Alsace)	.....	.....	29.90	759.5	37.8	3.2	78	SW	.....	.....	3	.....	10	.....	.....	0.256	6.5	.....	Dr. Schur.
Stuttgart	.....	.....	29.86	758.4	34.7	1.5	80	W	.....	.....	3	.....	10	.....	.....	0.169	4.3	.....	Prof. Schoder.
Thorn	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Dr. Hasenbalg.
Treves, (Trier)	.....	.....	29.69	754.0	38.3	3.5	75	W	.....	.....	5	.....	10	.....	.....	0.004	0.1	.....	Prof. Flesch.
Weissenburg, (Bavaria)	28.25	717.5	29.82	757.4	28.9	— 1.7	98	W	.....	.....	4	.....	4	.....	.....	0.217	5.5	.....	Dr. von Bebber.
Wustrow, Naval School	.....	.....	29.44	747.8	31.8	— 0.1	85	W	.....	.....	6	.....	7	.....	.....	0	0	.....	E. F. Schütz.
German Naval Series.																			

NOTE.—The elevation of Friedrichshafen is 413.4 meters, or 1,356.3 feet; Weissenburg, 131 meters, or 1,414.0 ft. In the originals the distinction between the amount of upper and lower clouds is not made. It is not always certain that the remarks in the weather column refer to the moment of observation.

GREEK SERIES.

Furnished by the coöperation of Professor Dr. J. F. Julius Schmidt, Director of the Royal Observatory at Athens.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Athens			29.69	754.1	59 9	15.5		NW										Very clear.	

Note.—The originals give the barometer corrected, but not reduced to sea-level; occasionally the kind of clouds; the weather as published. They omit the humidity, wind-force, amount of cloudiness and rain-fall.

INDIAN SERIES.

Furnished by the coöperation of H. F. Blanford, Meteorological Reporter to the Government of India.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Kurrachee																			
Deesa																			
Bombay																			
Poona																			
Lahore																			
Belgaum																			
Bangalore																			
Rorkee																			
Agra																			
Trichinopoly																			
Nagpur																			
Madras																			
Lucknow																			
Allahabad																			
Patna																			
Hazaribagh																			
Cuttack																			
Calcutta (Alipore)																			
Goalpara																			
Chittagong																			
Sibsagar																			
Rangoon																			
Jubbulpore																			

ITALIAN SERIES.

Furnished by the cooperation of His Excellency the Minister of Agriculture, Industry and Commerce, and the respective Observers.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Udine			29.63	752.7	44.2	6.8	63	S	2.5	1.1			8			0.05	1.5	Raining	Prof. Giovanni Clodig.
Stelvio	21.64	549.7			11.7	—11.3		E			1		9	S		0	0		Signora Ernesta Manfredi.
Valdobbia	21.76	552.8			12.9	—10.6	65	W			6		9	NW		0	0		Ab. Dom. Morgini.
Padua			29.62	752.4	47.7	8.7	70	SE	19.2	8.6			2			0.02	0.6	Light rain	Prof. Dott. Lorenzoi.
Vicenza			29.60	751.8	51.4	10.8	60	SSE	11.2	5.0			5	W		0	0		Conte Alm. Da Schio.
Verona			29.60	751.9	53.1	11.7	56	E			4		0			0	0		Dott. B. Bertoncelli.
Bergamo	28.34	719.9	29.68	753.9	47.8	8.8	4	NW			8		0			0	0		Prof Trionfini Carlo.
Domodossola			29.78	756.5	48.6	9.2	19	N			6		2			0	0		Prof. Giuseppe Calza.
Milan			29.72	754.9	50.5	10.3	29	N			6		0			0	0		Ab. Gio. Capelli
Pavia			29.69	754.0	51.1	10.6	12	N			8		0			0	0		Prof. Gio. Cantoni.
Moncalieri			29.72	754.8	51.1	10.6	25	WSW	12.5	5.6			1			0	0		Prof. P. F. Denza.
Mondovi	27.78	705.6	29.72	754.9	47.5	8.6	7	NW			6		0			0	0		Prof. D. C. Bruno.
Porto Maurizio			29.76	755.8	53.4	11.9	34	SW			4		0			0	0		Prof. L. Vassallo.
Genoa			29.69	754.1	55.4	13.0	10	NW	6.3	2.8			0			0	0		Prof. G. M. Garibaldi.
Piacenza			29.65	753.2	51.6	10.9	13	NW	24.8	11.1			1			0	0		Dott. G. Manzi.
Parma			29.67	753.5	53.1	11.7	41	NW			6		1			0.03	0.9		Prof. P. Pigorini.
Florence			29.67	753.7	51.8	11.0	45	NE			4		3	NW		0.09	2.3	Raining	Cav. F. Meucci.
Leghorn			29.61	752.0	55.0	12.8	21	NNW	15.4	6.9			2	NW		0	0		Prof. P. Monte.
Siena	28.41	721.6	29.64	752.9	48.2	9.0	43	N	8.1	3.6			3	N		0.02	0.5	Light rain	Prof. L. Toscani.
Urbino	28.08	713.1	29.67	753.7	37.8	3.2	86	N			4		10			0.41	10.5	Raining	Prof. P. Serpieri.
Pesaro			29.68	753.9	42.6	5.9	80	N	26.2	11.7			10	N		0.07	2.0	Rain & hail	Prof. Luigi Guidi.
Ancona			29.61	752.2	42.8	6.0	82	W			6		10	W		0.14	3.6	Raining	Prof. F. De— Bosis.
Grosseto			29.66	753.3	56.7	13.7	93	NW			6		3	NNW		0	0		Avv. P. Ponticelli.
Rome			29.64	752.9	57.7	14.3	34	WSW	18.6	8.3			2	NW		0.01	0.3		Prof's. P. Secchi & L. Respighi
Naples, O. U.			29.71	754.6	59.7	15.4	51	WSW			8		9	SW		0.01	0.4	Light rain	Prof. L. Palmieri.
Lecce			29.68	753.9	58.1	14.5	59	WSW	18.6	8.3			2			0	0		Prof. C. De—Giorgi.
Cosenza			29.82	757.3	54.3	12.4	71	SW	14.3	6.4			10			0.11	3.0	Rain & hail	Prof. F. D. Conti.
Cagliari			29.83	757.7	56.3	13.5	62	W			2		6	W		0.00	0.1	Light rain	Prof. A. Pacinotti.
Riposto, (Sicily)			29.79	756.7	63.0	17.2	50	SE			2		3	N		0	0		Pref. F. Cafiero.
Palermo			29.80	756.9	63.1	17.3	44	WSW	6.9	3.1			2			0.04	1.2	Raining	Prof. G. Cacciatore.
Caltanissetta	27.88	708.0	29.86	758.5	52.3	11.3	62	W			6		4	SE		0	0		Prof. A. Pagani.
Siracusa			29.79	756.7	64.0	17.8	53	W			6		3	W		0	0		Prof. V. Giuliano.
Sub-Series.																			
Naples, S. R.			29.75	755.6	55.4	13.0	62	WSW	20.6	9.2			10	W		0.00	0.2		Prof. F. Brioschi.

Note.—The originals give the wind-force by the scale 0 to 4, or the velocity in kilometers per hour; generally, no distinction between upper and lower clouds; occasionally the weather by the Vienna symbols. The elevation of Stelvio is 2,543.0 meters, or 8,342.9 feet; Valdobbia, 2,548.0 meters or 8,359.3 feet; Bergamo, 379.6 meters, or 1,2-5 3 feet; Mondovi, 556 meters, or 1,824.2 feet; Siena, 348.5 meters, or 1,143.3 feet; Urbino, 451 meters, or 1,479.7 feet; Caltanissetta, 570.3 meters, or 1,871.0 feet.

JAPANESE SERIES.

Furnished by the coöperation of the Imperial University of Tokei, Japan.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Tokei																			Prof. P. V. Vrieder.

Note.—The originals give the amount of cloudiness by the scale 0 to 4 without distinguishing between upper and lower clouds. The rain-fall is measured at 7 a. m., local time.

By authority of the SECRETARY OF PUBLIC WORKS.

MEXICAN SERIES.

Furnished by the coöperation of Senor Mariano Barcena, Director of the Central Meteorological Observatory in the City of Mexico.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Mexico																			Mariano Barcena. Vicente Reyes. Miguel Perez. (Engineers in charge.)

NOTE.—The elevation of Mexico is 2,290 meters, or 7,512.9 feet. The rain-fall is measured at 6 a. m., local time.

NETHERLANDS' SERIES.

Furnished by the coöperation of Professor Buys Ballot, Director of the Royal Meteorological Institute of the Netherlands at Utrecht.

Flushing			29.70	754.4	38.8	3.8		WNW			7					0.012	0.3		
Groningen			29.45	748.1	30.0	— 1.1		NW								0.130	3.3		
Helder			29.52	749.8	33.3	0.7		NNW			5					0.488	12.4		
Utrecht			29.46	748.3	36.1	2.3	87	WSW			5		8			0.087	2.2	Very cloudy	

NOTE.—The originals give the wind-pressure in kilograms per square meter; for Utrecht, they give the weather as published, from which the amount of cloudiness is taken by the scale 0 to 4, without distinguishing between upper and lower clouds. It is assumed that the barometer readings have been reduced to sea-level.

NORWEGIAN SERIES.

Furnished by the coöperation of Professor H. Mohn, Director of the Royal Norwegian Meteorological Institute at Christiania.

Bergen			29.18	741.2	28.8	— 1.8	88	SSE	6.3	2.8			10			0.098	2.5	Snowing	
Brönö			29.37	745.9	23.7	— 4.6	67	Calm	0	0			0			0	0		
Christiania			29.27	743.5	18.0	— 7.8	66	ESE	0.7	0.3			5			0.024	0.6		
Tromsö			29.29	744.0	19.4	— 7.0	70	S	4.5	2			8			0.039	1.0		

NOTE.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols. The cloudiness and weather at Bergen refer to 2h., p. m., local time, instead of 1h., 4 min.

PORTUGUESE SERIES.

Furnished by the coöperation of J. C. de Brito Capello, Director of the Meteorological Observatory of the Infante Don Luiz at Lisbon.

Angra, (Azores)			29.94	760.5	60.4	15.8	91	SW	15.4	6.9			9			0	0		Dr. J. A. Sampaio.
Campo Major			30.15	765.9	55.9	13.3	53	SSW	4.9	2.2			1			0	0		Dr. A. M. R. dos Santos.
Funchal, (Madeira)			30.28	769.1	61.5	16.4	50	SSE	6.3	2.8			8			0	0		Capt. D. A. de Cunha.
Lisbon			30.22	767.5	55.2	12.9	58	NW	8.7	3.9			6			Inap.	Inap.		The Observatory.
Ponta Delgada, (Azores)			30.07	763.6	63.0	17.2	81	S	8.1	3.6			10			0	0		

NOTE.—The originals give the wind-velocity in kilometers per hour, occasionally, the weather by the Vienna symbols; the amount of cloudiness without distinguishing between upper and lower clouds; the barometer corrected but not reduced to sea-level. The rain-fall at Libson is measured at noon, instead of 0 h. 6 m., p. m.

RUSSIAN SERIES.

Furnished by the cooperation of Professor H. Wild, Director of the Imperial Central Physical Observatory of Russia, at St. Petersburg.

Warsaw			29.41	747.1	33.1	0.6	87	W	20	9			5						Astronomical Obs.
Wilna			29.26	743 3	26.2	— 3.2	80	Calm	0	0			8						Astronomical Obs.
Dorpat			29.02	737.1	19.8	— 6.8	84	WSW	9	4			10						Physical Cabinet.
St. Petersburg			28.93	734.9	21.7	— 5.7	86	SSW	7	3			10					Light snow.	Central Physical Obs.
Kuopio			28.80	731.4	23.0	— 5.0	100	W	7	3			10					Snowing	Ch. Forsten.
Kieff			29.31	744.5	39.9	4.4	79	W	7	3			10						Physical Cabinet.
Nikolaiev			29.38	746.3	45.3	7.4	80	S	2	1			0						Kurdakof.
Kertch			29.37	746.0	46.9	8.3	92	S	7	3			10					Foggy	Lagorio.
Moscow			29.10	739.1	37.8	3.2	70	S	11	5			10						Meteorological Obs.
Lugan			29.35	745.5	34.7	1.5	96	ENE	9	4			10			Blank	Blank		Meteorological Obs.
Archangel			29.03	737.4	25.9	— 3.4	91	ESE	13	6			10					Snowing	Ogorodnikof.
Tiflis	28.41	721.5	29.83	757.7	49.8	9.9	76	Calm	0	0			10					Light rain	Physical Observatory.
Astrakhan			29.70	754.4	34.0	1.1	96	ESE	16	7			10						Sebastianof.
Kasan			29.51	749.6	34.0	1.1	69	S	11	5			0						Physical Cabinet.
Orenburg			30.19	766.8	34.3	1.3	92	SE	13	6			3						Tschernischef.
Ekaterinburg	28.52	724.3	29.49	749.1	28.2	— 3.2	74	SSW	2	1			10						Meteorological Obs.
Nukuss			30.05	763.3	50.5	10.3	66	ENE	9	4			1						
Kasaly																			Bobrof.
Tashkend	28.65	727 6	30.37	771.4	52.9	11.6	76	Calm	0	0			10						Michelson.
Barnaul			30.13	765.2	18.1	— 7.7	66	Calm	0	0			4						Meteorological Obs.
Yeniseisk			30.01	762.3	19.2	— 7.1	62	SW	2	1			1						Marks.
Irkutsk																			Usolzef.
Peking, (China)			30.32	770.1	27.5	— 2.5	62	S	9	4			0						Physical Observatory.
Nertchinsk																			Meteorological Obs.
Vladivostock																			
Nikolaievsk, on the Amoor																			

NOTE.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols; they omit the rain-fall. The elevation of Tiflis is 469 meters, or 1,541.8 feet; Ekaterinburg, 306.4 ? m., or 1,005.2 ? ft.; Tashkend, 494.2 ? m., or 1,621.3 ? ft.; Irkutsk, 392 m., or 1,286 ft. Nertchinsk, 592.0 ? m., or 1,942.2 ? ft.

SPANISH SERIES.

Furnished by the cooperation of Antonio Aguilar, Director of the Royal Observatory at Madrid, and of Don Cecilio Pujazon, Captain R. N. Director of the Naval Observatory at San Fernando.

Madrid			30.08	763.9	56.8	13.8	41	SE	8.0	1.33		0	0			0	0	Clear	Royal Observatory.
San Fernando			30.23	767.9	57.0	13.9	63	NW	11.2	5.0		0	8		NW	0	0		Naval Observatory.

NOTE.—The originals give the weather in general terms, as published; rain-fall for San Fernando from preceding to following midnight; wind-velocity for Madrid in kilometers per hour.

SWEDISH SERIES.

Furnished by the coöperation of Professor R. Rubenson, Director of the Royal Swedish Meteorological Institute, at Stockholm, and of Dr. H. H. Hildebrandsson, Chief of the Meteorological Division of the Upsala Observatory.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Haparanda			29.08	738.6	10.0	—12.2	100	N			6		10			0	0		
Umea																			
Hernosand			29.10	739.2	15.8	— 9.0	81	N			6		9			0	0		
Stockholm			29.13	739.8	10.8	—11.8	85	WNW			4		4			0.047	1.2		
Wisby			29.17	740.9	17.2	— 8.2	76	NW			4		10			0.071	1.8	Snowing	
Sub-Series.																			
Upsala			29.15	740.5	9.7	—12.4	77	NNW	0	0			7	NNW		0.020	0.51		Dr. Hildebrandsson.

Note.—The originals give the wind-force by the scale 0 to 6, and Upsala also velocity in meters per second; occasionally, the weather by the Vienna symbols, or in general terms; no distinction between the amount of upper and lower clouds. The rain-fall is measured at 8 a. m., local time.

SWISS SERIES.

Furnished by the coöperation of Professor R. Wolf, Director of the Observatory at Zurich, and of Professor E. Plantamour, Director of the Observatory at Geneva.

Geneva	28.57	725.6	30.04	763.0	39.6	4.2	52	ESE			1		9			0.134	3.4	Solar halo	The Observatory.
Zurich	28.29	718.6	30.00	761.9	34.5	1.4	65	W			2		10			0.098	2.5	Snowing	The Observatory.

Note.—For Geneva the corresponding departures from the normal values are: Barometer, 0.0 mm; Thermometer, —1.0 cent.; Relative Humidity, —25 per cent.

Note.—The rain-fall is measured at Zurich at 7 a. m. on the following day. The originals give the barometer corrected but not reduced to sea-level; the wind-force by the scale 0 to 4 for Zurich; the amount of cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The elevation of Geneva is 408 meters, or 1,339 feet, and that of Zurich 470 meters, or 1,542 feet.

TURKISH SERIES.

Furnished by the coöperation of A. Coumbary, Effendi, Director of the Central Observatory at Constantinople, and of Professor C. V. A. Van Dyck, Superintendent of the Lee Observatory at Beirut.

Constantinople																			
Fao, (Persian Gulf)																			
Salonica																			
Valona																			
Varna																			
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y			29.82	757.3	61.7	16.5	88	SSW			2		10n		SSW	0.37	9.4	Raining	Prof. C. V. A. Van Dyck

Note.—The originals give the wind-force by the scale 0 to 7, (except Beirut, by the scale 0 to 12, and Constantinople velocity in meters per second;) the weather in general terms as published; no distinction between upper and lower clouds, and, except Constantinople and Beirut, the amount by the scale 0 to 4. It is assumed that the barometer is reduced to sea-level.

CANADIAN SERIES.

Furnished by the coöperation of Professor G. T. Kingston, Director of the Magnetic Observatory at Toronto, and Superintendent of the Meteorological Office of the Dominion of Canada, and the respective Observers. Those marked with a star (*) are also telegraphed daily to the office of the Chief Signal Officer, U. S. Army.

Bathurst, N. B			30.10	764.5	11.1	—11.6	72	NW	7.5	3.4			0						Hon. J. Ferguson.
Brockville, Ontario			30.36	771.1	24	— 4.4		Calm	0	0		2c	0	NE		0	0	Fair	W. R. Bigg.
*Chatham, N. B			30.15	765.8	7	—13.9	79	W	5	2.2		0	0			0	0	Clear	G. A. Blair.
Charlottetown, P. E. Island			30.10	764.5	7	—13.9	88	NW	10	4.5		0	0			0.100	2.54	Clear	H. J. Cundall, C. E.
Cornwall, Ontario			30.37	771.4	19.0	— 7.2	90	NE			1	0	0			0	0	Bright	James Smith, M. A.
Dalhousie, N. B			30.20	767.1	3.0	—16.1	73	W			2					0	0	Clear	H. A. Johnson.
Esquimault, B. C			30.20	767.1	36.6	2.6	96	NE				0	0			0	0	Clear	W. H. Bevis.
*Father Point, Quebec			30.34	770.6	2	—16.7	83	Calm	0	0		0	0			0	0	Clear	J. McWilliams.
Fredericton, N. B			30.24	768.1	10.6	—11.9	67	NW	9	4.0		0	0			0	0	Clear	Prof. Harrison.
*Fort Garry, Manitoba			30.66	778.7	4	—16.6	95	Calm	0	0		0	0			0	0	Clear	James Stewart.
Goderich, Ontario			30.40	772.1	21.5	— 5.8	78	Calm			0	0	0			0	0	Clear	H. J. Strang, M. A.
Granton, Ontario	29.18	741.2	30.38	771.6	18.3	— 7.6		Calm			0	0	0			0	0	Clear	James Grant.
*Halifax, N. S			30.08	764.0	10	—12.2	79	N	5	2.2		0	0			0	0	Clear	F. Allison, M. A.
Hamilton, Ontario			30.41	772.4	28.2	— 2.1	79	SW			1	2cs	0			0	0	Bright	G. Dickson.
Heart's Content, N. F			29.36	745.7	0	—17.8	100	N			4	1c	0	N		0	0	Fine	E. Weedon.
*Kingston, Ontario			30.39	771.9	25	— 3.9	90	Calm	0	0		2c	0			0	0	Clear	S. Woods, M. A.
*Montreal, Quebec			30.36	771.1	19	— 7.2	73	NE	11	4.9		0	0			0	0	Clear	C. H. McLeod, C. E.
*Ottawa, Ontario			30.37	771.4	18	— 7.8	70	N	10	4.5		2cs	0	N		0	0	Clear	J. B. Haney.
*Parry Sound, Ontario			30.44	773.2	16	— 8.9	80	N	6	2.7		2cs	0	N		0	0	Clear	Rev. R. Mosley.
Port Dover, Ontario			30.36	771.1	28	— 2.2	77	NE	5	2.2		0	0			0	0	Clear	H. Morgan.
Port Hastings, N. S			29.94	760.5	6.8	—14.0		NW								0	0	Fine	Peter Grant.
Port Stanley, Ontario			30.36	771.1	19	— 7.2	90	N	8	3.6		0	0			0	0	Clear	M. Payne.
*Quebec, Quebec			30.35	770.9	19	— 7.2	85	Calm	0	0		0	0			0	0	Clear	Capt. Ashe, R. N.
*Rockliffe, Ontario			30.44	773.2	12	—11.1	80	NW	4	1.8		0	0			0	0	Clear	
St. John, N. B			30.22	767.6	11	—11.7	80	N	6	2.7		0	0			0	0	Clear	G. Murdoch, C. E.
*Saugeen, Ontario			30.40	772.1	15	— 9.4	91	Calm	0	0		0	0			0	0	Clear	K. Stewart.
Stayner, Ontario			30.39	771.9	20	— 6.7	69	NW	4	1.8		0	0			0	0	Clear	R. J. Cole.
Stratford, Ontario	29.02	737.1	30.40	772.1	17.5	— 8.1	86	NE	1	0.4		0	0			0	0	Fine	C. J. MacGregor, M. A.
*Sydney, C. B			29.91	759.7	8	—13.3	75	NW	13	5.8		0	0			0.06	1.5	Clear	T. C. Hill.
*Toronto, Ontario			30.38	771.6	25	— 3.9	61	N	8	3.6		2cs	0			0	0	Clear	Magnetic Observatory.
Woodstock, Ontario			30.40	772.1	22.1	— 5.5	87	Calm	0	0		0	0			0	0	Clear	J. Montgomery.
Sub-Series.																			
St. Johns, Newfoundland			29.39	746.5	6.0	—14.4		NE					10n			0.04	1.0	Squally	John Delany.

Note.—The originals for Brockville, Charlottetown, Port Dover, Port Stanley, Stayner, St. Johns, N. F. and those telegraphed, give the amount of cloudiness by the scale 0 to 4. The elevation of Granton is 1,015 feet, or 309.4 m.; Stratford, 1,162 feet, or 360.3 m

UNITED STATES SERIES.

Furnished by the coöperation of Bvt. Brig. Gen. Albert J. Myer, Chief Signal Officer, U. S. Army.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'r —10.	Clouds. Amount. Low'r —10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Albany, N. Y.	.....	.....	30.28	769.1	26	— 3.3	77	NW	2	0.9	.....	1k	0	.....	.....	0	0	Clear	
Alpena, Mich.	.....	.....	30.46	773.4	16	— 8.9	66	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Atlantic City, N. J.	.....	.....	30.24	768.1	32	0.0	79	NW	9	4.0	.....	5c	0	W	.....	0	0	Fair	
Augusta, Ga.	.....	.....	30.25	768 3	43	6.1	92	NW	3	1.3	.....	8cs	Sm'e	NW	.....	0	0	Fair	
Baltimore, Md.	.....	.....	30.30	769.6	37	2.8	62	NW	4	1.8	.....	5k	2s	NW	NW	0	0	Fair	
Barnegat, N. J.	.....	.....	30.24	768.1	32	0.0	79	N	14	6.3	.....	2cs	8k	W	NE	0	0	Fair	
Bismarck, Dakota	28.03	727.2	30.45	773.4	15	— 9.4	66	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Boston, Mass.	.....	.....	30.26	768.6	31	— 0.6	60	N	6	2.7	.....	2c	Haze	NW	.....	0	0	Clear	
Breckenridge, Minn.	.....	.....	30.58	776.7	15	— 9.4	88	NE	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Buffalo, N. Y.	.....	.....	30.33	770.4	30.(	— 1.1	78	W	4	1.8	.....	10k	0	W	.....	0	0	Cloudy	
Burlington, Vt.	.....	.....	30.36	771.1	23	— 5.0	60	Calm	0	0	.....	2c	0	.....	.....	0	0	Fair	
Cairo, Ill.	.....	.....	30.34	770.6	33	0.6	79	N	6	2.7	.....	0	0	.....	.....	0	0	Clear	
Cape Hatteras, N. C.	.....	.....	30.21	767.3	39	3.9	71	NE	12	5.4	.....	5ck	1s	W	NE	0	0	Fair	
Cape Henry, Va.	.....	.....	30.28	769.1	38	3.3	81	N	9	4.0	.....	5k	5s	.....	.....	0	0	Cloudy	
Cape Lookout, N. C.	.....	.....	30.29	769.4	40	4.4	82	NE	16	7.2	.....	2ck	5s	NE	.....	0	0	Fair	
Cape May, N. J.	.....	.....	30.26	768.6	34	1.1	80	N	16	7.2	.....	.....	10s	.....	NW	0	0	Cloudy	
Charleston, S. C.	.....	.....	30.22	767.6	47	8.3	77	N	7	3.1	.....	.....	10s	.....	W	0	0	Cloudy	
Cheyenne, Wyoming	24.04	610.6	29.98	761.5	27	— 2.8	100	SE	16	7.2	.....	.....	Fog	.....	.....	0.01	0.3	Foggy	
Chicago, Ill.	.....	.....	30.38	771.6	35	1.7	68	E	6	2.7	.....	5k	0	NW	.....	0	0	Fair	
Cincinnati, Ohio.	.....	.....	30.30	769.6	32	0.0	79	SE	2	0.9	.....	.....	Fog	.....	.....	0	0	Foggy	
Cleveland, Ohio.	.....	.....	30.39	771.9	23.5	— 4.7	93	NE	6	2.7	.....	.....	10s	.....	.....	0	0	Cloudy	
Corsicana, Tex.	.....	.....	30.24	768.1	43	6.1	51	NE	5	2.2	.....	Haze	5s	.....	.....	0	0	Hazy	
Davenport, Iowa.	.....	.....	30.46	773.7	28	— 2.2	77	N	5	2.2	.....	Haze	0	.....	.....	0	0	Clear	
Denison, Tex.	.....	.....	30.32	770.1	35	1.7	70	NE	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Denver, Col.	24.82	630.4	30.04	763.0	31	— 0.6	89	NW	1	0.4	.....	.....	10s	.....	.....	0	0	Cloudy	
Detroit, Mich.	.....	.....	30.36	771.1	24	— 4.4	87	N	3	1.3	.....	5c	0	.....	.....	0	0	Fair	
Dodge City, Kan.	27.70	703.6	30.14	765.5	30	— 1.1	89	E	9	4.0	.....	.....	10s	.....	E	0	0	Cloudy	
Dubuque, Iowa.	.....	.....	30.48	774.2	27	— 2.8	77	N	2	0.9	.....	0	0	.....	.....	0	0	Clear	
Duluth, Minn.	.....	.....	30.56	776.2	20	— 6.7	84	Calm	0	0	.....	5c	0	.....	.....	0	0	Clear	
Eastport, Me.	.....	.....	30.20	767.1	17	— 8.3	67	N	16	7.2	.....	0	0	.....	.....	0	0	Fair	
Erie, Pa.	.....	.....	30.36	771.1	27	— 2.8	88	SW	1	0.4	.....	5ck	0	NW	.....	0	0	Clear	
Escanaba, Mich.	.....	.....	30.48	774.2	20	— 6.7	70	NW	8	3.6	.....	5c	0	N	.....	0	0	Fair	
Fort Gibson, Indian Ter.	.....	.....	30.32	770.1	27	— 2.8	88	SW	1	0.4	.....	2c	0	.....	.....	0	0	Fair	
Ft. St. Michael, Alaska.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Clear	
Fort Sill, Indian Ter.	28.99	736.3	30.27	768.8	35	1.7	69	NE	11	4.9	.....	2k	0	.....	.....	0	0	Fair	
Fort Sully, Dakota.	28.70	729.0	30.52	775.2	21	— 6.1	85	SE	4	1.8	.....	.....	10s	.....	.....	0	0	Cloudy	
Florence, Arizona.	28.41	721.6	29.93	760.2	55	12.8	.....	SE	.....	.....	.....	.....	10s	.....	SE	0.13	3.3	Cloudy	
Galveston, Tex.	.....	.....	30.18	766.6	49	9.4	71	NE	12	5.4	.....	3c,hz	Haz	SW	.....	0	0	Hazy	
Grand Haven, Mich.	.....	.....	30.40	772.1	27	— 2.8	82	NE	5	2.2	.....	1c	4s	SW	SW	0	0	Fair	
Indianapolis, Ind.	.....	.....	30.35	770.9	31	— 0.6	73	N	3	1.3	.....	5ck	5s,sm'	.....	.....	0	0	Fair	
Indianola, Tex.	.....	.....	30.16	766.1	63	11.7	73	NE	20	8.9	.....	5cs	Haz	.....	.....	0	0	Fair	
Jacksonville, Fla.	.....	.....	30.15	765.8	64	12.2	79	NE	6	2.7	.....	2k	0	W	.....	0	0	Fair	
Keokuk, Iowa.	.....	.....	30.35	770.9	33	0.6	79	NE	5	2.2	.....	.....	10s	.....	NE	0	0	Cloudy	
Key West, Fla.	.....	.....	30.34	763.0	65	18.3	83	N	4	1.8	.....	0	0	.....	.....	1.20	30.5	Clear	
Kittyhawk, N. C.	.....	.....	30.29	769.4	34	1.1	90	NW	8	3.6	.....	5ck	2s	NW	.....	0	0	Fair	
Knoxville, Tenn.	.....	.....	30.27	768.8	33	0.6	69	N	7	3.1	.....	8ck	0	SW	.....	0	0	Cloudy	
La Crosse, Wis.	.....	.....	30.49	774.4	26	— 3.3	63	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Leavenworth, Kan.	.....	.....	30.42	772.7	30	— 1.1	89	N	4	1.8	.....	5ck	0	NW	.....	0	0	Fair	
Louisville, Ky.	.....	.....	30.33	770.4	30	— 1.1	78	NW	2	0.9	.....	2c	0	.....	.....	0	0	Clear	
Lynchburg, Va.	.....	.....	30.32	770.1	31	— 0.6	79	Calm	0	0	.....	2ck	0	W	.....	0	0	Clear	
Malone, N. Y.	.....	.....	30.36	771.1	16	— 8.9	83	S	3	1.3	.....	0	0	.....	.....	0	0	Clear	
Marquette, Mich.	.....	.....	30.48	774.2	28	— 2.2	67	NW	4	1.8	.....	5ck	0	.....	.....	0	0	Fair	
Memphis, Tenn.	.....	.....	30.33	770.4	32	0.0	89	N	4	1.8	.....	0	Fog	.....	.....	0	0	Clear	
Milwaukee, Wis.	.....	.....	30.46	773.7	29	— 1.7	89	N	9	4.0	.....	0	2s	.....	.....	0	0	Clear	
Mobile Ala.	.....	.....	30.20	767.1	39	3.9	80	N	8	3.6	.....	0	Fog	.....	.....	0	0	Clear	
Montgomery, Ala.	.....	.....	30.22	767.6	42.5	5.8	74	N	4	1.8	.....	5ck	Haz	SW	.....	0	0	Fair	
Morgantown, W. Va.	29.23	742.4	30.30	771.1	27.5	— 2.5	77	Calm	0	0	.....	10c	0	W	.....	0	0	Cloudy	
Mt. Washington, N. H.	23.72	602.5	30.08	764.0	10	—12.2	79	NW	12	5.4	.....	0	0	.....	.....	0	0	Clear	
Nashville, Tenn.	.....	.....	30.27	768.8	32	0.0	89	N	3	1.3	.....	2ck	Fog	.....	.....	0	0	Fair	
New Haven, Conn.	.....	.....	30.26	768.1	33	0.6	90	NE	5	2.2	.....	0	0	.....	.....	0	0	Clear	
New London, Conn.	.....	.....	30.25	768.3	36	2.2	45	N	7	3.1	.....	0	0	.....	.....	0	0	Clear	
New Orleans, La.	.....	.....	30.18	766.6	44	6.7	71	NE	6	2.7	.....	0	0	.....	.....	0	0	Clear	
Newport, R. I.	.....	.....	30.24	768.1	32	0.0	69	N	7	3.1	.....	Haze	Sm'e	.....	NE	0	0	Clear	
New York, N. Y.	.....	.....	30.27	768.8	36	2.2	62	NE	11	4.9	.....	1c	0	NW	.....	0	0	Clear	
Norfolk, Va.	.....	.....	30.29	769.4	37	2.8	80	N	8	3.6	.....	.....	10s	.....	NE	0	0	Cloudy	
North Platte, Neb.	27.30	695.7	30.14	765.5	26	— 3.3	100	E	6	2.7	.....	10k	0	N	.....	0	0	Cloudy	
Omaha, Neb.	29.27	743.4	30.43	772.9	30	— 1.1	78	N	4	1.8	.....	.....	Fog	.....	E	0.30	7.6	Foggy	
Oswego, N. Y.	.....	.....	30.32	770.1	29	— 1.7	77	Calm	0	0	.....	.....	10s	.....	.....	Inap.	Inap.	Cloudy	
Pembina, Dakota.	.....	.....	30.35	778.0	0	—17.8	85	Calm	0	0	.....	5cs	Haz	.....	.....	0	0	Fair	
Philadelphia, Pa.	.....	.....	30.26	768.6	33	0.6	61	N	14	6.3	.....	0	0	.....	.....	0	0	Clear	
Pike's Peak, Col.	17.60	447.0	29.81	757.2	5	—15.0	100	SE	11	4.9	.....	5c cs	0	W	.....	0	0	Fair	
Pittsburgh, Pa.	.....	.....	30.34	770.6	29	— 1.7	83	NW	4	1.8	.....	.....	Fog	.....	.....	0.09	2.3	Foggy	
Port Huron, Mich.	.....	.....	30.36	771.1	25	— 3.9	75	NE	5	2.2	.....	.....	10s	.....	NW	0	0	Cloudy	
Portland, Me.	.....	.....	30.24	768.1	27	— 2.8	67	NE	10	4.5	.....	0	Haze	.....	.....	0	0	Clear	
Portland, Oregon.	.....	.....	30.27	768.8	40	4.4	91	Calm	0	0	.....	1k	0	.....	.....	0	0	Clear	
Punta Rassa, Fla.	.....	.....	30.07	763.8	62.5	16.9	91	NE	6	2.7	.....	.....	10s	.....	.....	0	0	Cloudy	
Rochester, N. Y.	.....	.....	30.32	770.1	32.5	0.3	65	NE	4	1.8	.....	0	5s	.....	E	0.52	13.2	Fair	
Salt Lake City, Utah.	25.58	649.7	29.90	759.4	41	5.0	73	W	4	1.8	.....	5ck	0	NE	.....	Inap.	Inap.	Fair	
Sandy Hook, N. J.	.....	.....	30.24	768.1	36	2.2	70	N	11	4.9	.....	.....	10s	.....	.....	0.02	0.5	Cloudy	
San Diego, Cal.	.....	.....	29.99	761.7	47	8.3	85	E	4	1.8	.....	.....	10ks	.....	N	0	0	Cloudy	
San Francisco, Cal.	.....	.....	30.07	763.8	50	10.0	93	SW	4	1.8	.....	0	5s	.....	E	0.06	1.5	Fair	
Santa Fé, N. M.	23.24	590.3	29.78	756.4	28	— 2.2	67	E	14	6.3	.....	0	Fog	.....	.....	0	0	Fair	
Savannah, Ga.	.....	.....	30.22	767.6	48	8.9	77	NE	4	1.8	.....	10k	0	E	.....	0.02	0.5	Cloudy	
Shreveport, La.	.....	.....	30.34	770.6	35	1.7	90	NE	6	2.7	.....	8ck	2k	NW	SE	0	0	Fair	
Smithville, N. C.	.....	.....	30.28	769.1	40	4.4	83	N	10	4.5	.....	0	Sm'e	.....	.....	0	0	Clear	
Springfield, Mass.	.....	.....	30.29	769.4	34	1.1	65	NE	4	1.8	.....	.....	10ks	.....	N	0	0	Cloudy	
St. Louis, Mo.	.....	.....	30.39	771.9	30	— 1.1	78	NE	8	3.6	.....	0	0	.....	.....	0	0	Clear	
St. Marks, Fla.	.....	.....	30.15	765.8	48	8.9	77	N	4	1.8	.....	0	Sm'e	.....	.....	0	0	Clear	
St. Paul, Minn.	.....	.....	30.50	774.7	22	— 5.6	72	N	3	1.3	.....	5k	0	W	.....	0	0	Fair	
St Paul's Island, Alaska.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0	1s	.....	.....	0	0	Clear	
Thatcher's Island, Mass.	.....	.....	30.27	768.8	31	— 0.6	68	NE	20	8.9	.....	.....	.....	.....	.....	.....	.....	.....	
Toledo, Ohio.	.....	.....	30.38	771.6	27	— 2.8	66	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Tucson, Arizona.	27.49	698.2	30.04	763.0	43	6.1	.....	E	.....	.....	.....	5c	Haze	.....	.....	0	0	Fair	
Tybee Island, Ga.	.....	.....	30.04	763.0	43	6.1	.....	E	.....	.....	.....	.....	10s	.....	E	0.72	18.3	Cloudy	
Vicksburg, Miss.	.....	.....	30.19	766.8	50	10.0	86	NE	12	5.4	.....	0	5ks	.....	SE	0	0	Fair	
Virginia City, M. T.	.....	.....	30.32	770.1	32	0.0	89	NE	4	1.8	.....	0	Sm'e	.....	NE	0	0	Clear	
Washington, D. C.	24.20	614.2	29.74	755.4	27	— 2.8	77	SE	2	0.9	.....	10k	0	SW	.....	0	0	Cloudy	
Wilmington, N. C.	.....	.....	30.32	770.1	35	1.7	75	NW	7	3.1	.....	.....	10s,sm'	.....	N	0	0	Cloudy	
	.....	.....	30.28	769.1	38	3.3	71	NE	0	4.0	.....	10ck	0	W	.....	0	0	Cloudy	

UNITED STATES SERIES.—CONTINUED.

STATIONS.	BAROMETER. Corrected for instrum'tal error and temperature. Inches.	BAROMETER. Corrected for instrum'tal error and temperature. Millimeters.	BAROMETER. Reduced to sea-level. Inches.	BAROMETER. Reduced to sea-level. Millimeters.	TEMPERATURE OF THE AIR. Fahrenheit.	TEMPERATURE OF THE AIR. Centigrade.	RELATIVE HUMIDITY. Per cent.	WIND. Direction. From—	WIND. Velocity. Miles per hour.	WIND. Velocity. Meters per second.	WIND. Force. 0—10.	CLOUDS. Amount. Up'er 0—10.	CLOUDS. Amount. Low'r 0—10.	CLOUDS. Direction. Upper. From—	CLOUDS. Direction. Lower. From—	RAIN-FALL OR MELTED SNOW IN THE PAST 24 HOURS. Inches.	RAIN-FALL OR MELTED SNOW IN THE PAST 24 HOURS. Millimeters.	WEATHER.	OBSERVER.
Wood's Holl, Mass.	.....	.....	30.24	768.1	36	2.2	53	N	3	1.3	.....	2c	0	SW	.....	0	0	Fair	
Yankton, Dakota	29.15	740.4	30.56	776.2	22	— 5.6	72	N	3	1.3	.....	5c	0	W	.....	0	0	Fair	
Yuma, Arizona	.....	.....	30.00	762.0	59	15.0	.....	N	.....	.....	.....	0	2s	.....	W	0.05	1.3	Fair	
SUB-SERIES.																			
Kingston, Jamaica, W. I.	.....	.....	30.20	767.1	75	23.9	76	Calm	0	0	.....	2c	2s	.....	SE	0	0	.....	James Gall.
Navassa, W. I.	.....	.....	.....	.....	78	25.6	.....	NE	.....	.....	1	.....	.....	.....	.....	.....	.....	Light rain	Dr. G. H. Davison.
Clifton, Ja., W. I.	27.20	690.9	30.00	762.0	64	17.8	83	NE	1.9	0.4	.....	0	0	.....	.....	0	0	Fine	C. Partridge.
Paramaribo, D. Guiana, S.A	.....	.....	30.04	763.0	82	27.8	83	E	.....	.....	3	3c	6k	E	.....	0	0	Fair	C. J. Hering.
Batavia, Dutch Guiana, S.A.	30.07	763.7	.....	.....	79.7	26.5	.....	E	.....	.....	.....	.....	.....	.....	.....	0	0	Cloudy	Dr. H. Groot.
Medellin, Colombia, S. A.	25.23	640.8	.....	.....	67.5	19.7	71	Calm	.....	.....	0	0	0	.....	.....	0	0	Clear	Thomas Herran.
York Factory, B. A.	.....	.....	30.28	769.1	18.5	— 7.5	92	W	2	0.9	.....	1c	0	N	.....	0	0	Fair	J. Fortescue, W. Wood
Honolulu, Oahu, H. I.	.....	.....	29.95	760.7	71	21.7	95	S	.....	.....	3	.....	.....	.....	.....	0.14	3.6	Cloudy	Daniel Smith.
Makawao, Maui, H. I.	.....	.....	29.81	757.2	60	15.6	88	N	.....	.....	1	0	Fog	.....	.....	0	0	Misty	F. L. Clarke

NOTE.—The originals give the amount of cloudiness by the scale 0 to 4, except York Factory, Makawao, Medellin and Paramaribo. The elevation of the barometer at Bismarck is 1,677 feet, or 511.1 meters; Cheyenne, 6,057.3 ft., or 1,846.2 m.; Clifton, about 1,892 ft., or 881.5 m.; Denver, 5,186 ft., or 1,565.2 m.; Dodge City, 2486ft., or 757.6 m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Florence, 1,550 (?) ft., or 472.5 (?) m.; Makawao, 1,906 ft., or 672.1 m.; Morgantown, 1,027.9 ft., or 313.3 m.; Medellin, 4,876 ft., or 1,486.2 m.; Mt. Washington, 6,285 ft., or 1,915.6 m.; North Platte, 2,846 ft., or 867.4 m.; Omaha, 1,054.6 ft., or 321.4 m.; Pike's Peak, 14,160.7 ft., or 4,318.1 m.; Salt Lake City, 4,362.2 ft., or 1,329.6 m.; Santa Fé, 6,862.2 (?) ft., or 2,091.6 (?) m.; Tucson, 2,545 (?) ft., or 775.7 (?) m.; Virginia City, 5,480 (?) ft., or 1,670.3 (?) m.; Yankton, 1,278 ft., or 389.5 m. The following constants are added in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Denver, 5.22 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fé, 6.54 in.; Tucson, 2.59 in.; Virginia City, 5.48 in. The elevation of Batavia is about feet; the barometric readings need the addition of 0.2 mm. or 0.01 in. for reduction to sea-level.

UNITED STATES NAVAL SERIES.

By authority of the **SECRETARY OF THE NAVY.**

Furnished by the coöperation of the Navy Department, through Commodore Daniel Ammen, U. S. N., Chief of Bureau of Navigation.

STATIONS AND VESSELS.	True course toward—	Hourly rate in knots.	*Barometer as reported.		Temperature of the Air.		Relative Humidity.	Wind.				Clouds.				Rain-fall or melted snow in the past 24 hours.		State of Ocean.	Direction of swell from—	Weather.	Observer.
								Direction.	Velocity		Force.	Amount.		Direction.							
												Up'er	Low'r	Up'er	Low'r						
			Inches.	Millimeters.	Fahrenheit.	Centigrade.	Per cent.	From—	Miles per hour.	Meters per second.	0—10.	0—10.	0—10.	From—	From—	Inches.	Millimeters.				
Naval Academy, Annapolis, Md.			29.92	760.0	36	2.2	70	NNW			3		10			0	0			Cloudy	
Naval Hospital, Annapolis, Md.			30.29	769.4	35	1.7	63	N			1		8		N	0	0			Cloudy	
Navy Yard, Mare Island, Cal.			30.14	765.5	49	9.4		W			1		6			0	0			Pleasant	
Navy Yard, Norfolk, Va.			30 36‡	771.1‡	37	2.8	71	N	3	1.3			8ks			0	0			‡D. clouds	
Navy Yard, Pensacola, Fla.			30.22	767.6	45	7.2	92	N	11	4.9			0			0	0			Foggy	
NavyYard, Portsmouth, N.H.			30.20	767.1	26	— 3.3		N	8	3.6			0			0	0			Clear	
¶ Canonicus, New Orleans, La.			30.10	764.5	45	7.2	100	NE			3		0							Hazy	
Colorado, New York, N. Y.			30.30	769.6	37	3.8		N	2	0.9			9			0	0			‡D. clouds	
Essex, Vera Cruz, Mex.			30.04	763.0	72	22.2	100	NW			2		8		N			Smooth		‡D. clouds	
¶ Gettysburg, off Sportono, Italy			29.66	753.4	58	14.4		NW			4		1							‡D. clouds	
Hartford, Hampton Roads, Va.			30.38	771.6	38	3.3		NW			1		10			0	0			Overcast	
Huron, Charleston, S. C.			30.26	768.6	49	9.4	78	NNE			2		8		N&E					Hazy	
Lackawana, Mare Island, Cal.			29.90	759.4	53	11.7	86	WNW			2		3		E			Smooth		‡D. clouds	
Marion, Port Said, Egypt			29.93	760.2	66	18.9	89	NW			2		6		E	Blank	Blank	Smooth		‡D. clouds	
Michigan, Erie, Pa.			29.82	757.4	26	— 3.5	88	SW			1		5		SW					Partly cl'dy	
Monongahela, Baltimore, Md.			30.30	769.6	37	2.8		N			2		s, k, n							Hazy	
New Hampshire, Port Royal, S. C.			30.37	771.7	49	9.4		NE			1		7		N&E					‡D. clouds	
Omaha, Panama			30.05	763.3	74	23.3	95	NW			1		1		S	0	0	Smooth		Hazy	
Ossipee, Pensacola, Fla.			30.19	766.8	45	7.2		N			3									Hazy	
Pensacola, Panama			30.05	763.3	76	24.4	95	NW			1		2			0	0			Pleasant	
Plymouth, New Orleans, La.			30.16	766.1	46	7.8	77	NE			3		0							Misty	
Ranger, Hampton Roads, Va.			30.42	772.7	38	3.3		NW			2		3					Smooth		Hazy	
Richmond, Montevideo, Uruguay			30.14	765.5	67.6	19.4	95	E			1		2							‡D. clouds	
¶ Rio Bravo, Matamoras, Mex.			29.94	760.5	59	15.0		E			2		10							Drizzling	
Santee, Annapolis, Md.			30.35	770.9	37	2.8	71	NNW			3		10							Cloudy	
St. Louis, League Island, Pa.			30.12	765.0	41	5.0		NNW	4	1.8			2		E	0	0			Fair	
Vandalia, Constantinople, Turkey			29.65	753.1	60	15.6	94	NW			1		3		SE					‡D. clouds	
Wabash, Boston, Mass.			30.30	769.6	31	— 0.6		N	6	2.7			8			0	0			‡D. clouds	
Wyoming, Washington, D. C.			30.25†	768.3	36	2.2		Calm			0		6								

* It is not known that the barometer is corrected for temperature, instrumental error or elevation. † Aneroid Barometer. ‡ Detached clouds. ¶ Barometer corrected for instrumental error and reduced to sea-level.

UNITED STATES MARINE SERIES

REPORTED TO THE OFFICE OF THE CHIEF SIGNAL OFFICER OF THE ARMY.

NAMES OF VESSELS.	True course toward—	Hourly rate in knots.	Barometer reduced to sea-level.		Temperature of the Air.		Relative Humidity.	Wind.				Clouds.				State of Ocean.	Direction of swell from—	Weather.	OBSERVER
								Direction.	Velocity.		Force.	Amount.		Direction.					
												Up'er	Low'r	Upper.	Lower.				
			Inches.	Millimeters.	Fahrenheit.	Centigrade.	Per cent.	From—	Miles per hour.	Meters per second.	0—10.	0—10.	0—10.	From—	From—				
PACIFIC MAIL S. S. CO. MARINE SERIES.																			
Furnished by the coöperation of ————, President; Williams, Blanchard & Co., Agents.																			
S. S. City of Peking																			Lt. Z. L. Tanner, U.S.N
OCCIDENTAL AND ORIENTAL S. S. CO. MARINE SERIES.																			
Furnished by the coöperation of George H. Bradbury, President; T. H. Goodman, Agent.																			
S. S. Belgic																			Capt. John Metcalf.
S. S. Gaelic																			Capt. W. H. Kidley
S. S. Oceanic																			Capt. H. Parsell.
NORTH GERMAN LLOYD OF BREMEN MARINE SERIES.																			
Furnished by the coöperation of A. Schumacher & Co., Agents.																			
S. S. Baltimore																			Capt. H. Andressen.
S. S. Berlin																			Capt. C. Pohle.
S. S. Braunschweig																			Capt. K. Undütsch.
S. S. Nürnberg																			Capt. A. Jaeger.
S. S. Ohio																			Capt. G. Meyer.
MARINE SERIES. (Miscellaneous.)																			
Furnished by the coöperation of the Observer named.																			
Schooner Addie Fuller, Dutch Island			30.16	766.1	35	1.7	70	NNE	7	3.1		0	0			0	0	Clear	Capt. James Jorgensen

NOTE.—The schooner Addie Fuller gives the amount of cloudiness by the scale 0 to 4.

COLLATED AT THE OFFICE OF THE CHIEF SIGNAL OFFICER OF THE ARMY, WASHINGTON, D. C.

The records which appear in this Bulletin are copied from the regular exchanges of this office, made in each instance in compliance with an especial request and are published for the uses of the coöperating observers. The barometric readings in the first two columns are reduced to freezing and their respective standards; those in the second two also to mean sea-level. The "weather" is generally published as given.

When the distinction between the upper and lower strata of clouds is not reported, the *kinds* or *types*, viz: cirrus, cumulus, stratus, nimbus, scud, fracto, pallio, haze, fog and smoke, as indicated, respectively, by the letters c, k, s, n, d, f, p, hz., fg. and sm'e, are generally published with the amount in the lower-cloud column. The distinction between the upper and lower strata is carefully made in the United States Series and a portion of the Canadian Series, and the types are indicated by the above letters or their combinations in the proper column.

Albert J. Myer

Brig. Gen. (Bvt. Assg^{d}.) Chief Signal Officer, U. S. A.

BULLETIN

OF

INTERNATIONAL METEOROLOGICAL OBSERVATIONS,

TAKEN SIMULTANEOUSLY ON FEBRUARY 28, 1877.

7:35 A. M. WASHINGTON mean time.

6:7 A. M. MEXICO mean time.
7:7 A. M. SAN JOSE mean time.
0:6 P. M. LISBON mean time.
0:28 P. M. MADRID mean time.
0:43 P. M. GREENWICH mean time.
0:53 P. M. PARIS mean time.
1:1 P. M. BRUSSELS mean time.
1:4 P. M. UTRECHT mean time.
1:13 P. M. BERNE mean time.
1:26 P. M. CHRISTIANIA mean time.
1:33 P. M. COPENHAGEN mean time.
1:33 P. M. ROME mean time.
1:37 P. M. BERLIN mean time.
1:49 P. M. VIENNA mean time.
1:55 P. M. STOCKHOLM mean time.
2:18 P. M. ATHENS mean time.
2:39 P. M. CONSTANTINOPLE mean time.
2:44 P. M. ST. PETERSBURG mean time.
6:36 P. M. CALCUTTA mean time.
10:2 P. M. TOKEI mean time.

ALGERIAN SERIES.

Furnished by the coöperation of General d'Eudeville, Commandant Supérieur du Génie in Algeria.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Nemours			30.26	768.6	64.6	18.1		S			2		2			0	0	Clear	Michel.
Algiers			30.21	767.3	63.0	17.2		W			2		4			0	0	Fair	Biscarrat.
La Calle			30.13	765.3	61 0	16.1		NW			3		3			0	0	Fair	Fleury.
Tunis			30.12	765.0	64.8	18.2		WNW			4		2			0	0	Clear	Jacques.
Sfax																			
Saida			30.24	768.0	51.8	11.0		NW			2		3			0	0	Fair	Millot.
Tebessa			30.14	765.6	50.7	10.4		NNW			3		2			0	0	Clear	Bourgeois.
Geriville			30.12	765.1	43.0	6 1		N			4		3			0	0	Fair	Lemaillot.
Laghouat			30.17	766.3	55.9	13.3		N			1		0			0	0	Clear	Guyot.
Biskra			30.17	766.3	68.2	20.1		NW			4		5			0	0	Fair	Kuntz.

Note.—In the originals the distinction between the amount of upper and lower clouds is apparently not made. The weather is published as given. The rain-fall is measured at 7 a. m., local time.

AUSTRIAN SERIES.

Furnished by the cooperation of Professor Dr. Julius Hann, Director of the Imperial and Royal Central Meteorological Institute at Vienna.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Agram			29.81	757.2	31.8	— 0.1	90	Calm			0		10			1.031	0.8		Prof. Ivan Stoxir.
Cracow, I. R. Observatory			29.64	752.9	29.1	— 1.6	96	W			4		8			0.106	2.7		Dr. Wierzbiski.
Eperies			29.63	752.7	31.3	— 0.4	78	N			3		10k,s		S	0 046	1.17		Julius Mikolik.
Gratz	28.54	724.8	29.83	757.6	34.7	1.5	33	NW			7		7			0	0		Andreas Rospini.
Hermannstadt	28.24	717.4	29.71	754.7	32.0	0.0	74	WNW			3		0			0.416	10.55		Prof. Reissenberger.
Kremsmünster	28.48	723.3	29.88	759.0	28.8	— 1.8	64	W			5		8			0.059	1.5		Prof. C. Wagner.
Lemberg			29.57	751.1	32.0	0.0	92	SE			2		5			0.004	0.1		Dr. T. Stanecki.
Nyiregyhaza																			Habzsuda Daniel.
Pola			29.67	753.7	45.5	7.5	69	NNW			2		10ns			0.071	1.80		I.R.Hydrographic Office
Szegedin			29.82	757.3	35.6	2.0	59	N			2		10			0	0		Karl Stancel.
Trieste			29.74	755.4	39.2	4.0	67	NE			1		6			0.087	2.2	Hailing	Prof. V. Farolfi.
Vienna			29.78	756.3	31.6	— 0.2	61	W			0		3			0.079	2.0		I. R. Central Met. Obs'y.

Note.—The originals give, occasionally, the weather by the Vienna symbols. The distinction between upper and lower clouds is not made. It is not always certain that the weather remarks refer to the exact moment of observation. At Lemberg the rain-fall is measured at 7 p. m., local time. The elevation of Gratz is 343.5 meters, or 1,126.9 feet; Hermannstadt, 407.8 meters, or 1,337.9 feet; Kremsmünster, 383.6 meters, or 1,258.5 feet.

BELGIAN SERIES.

Furnished by the cooperation of J. C. Houzeau, Director of the Royal Observatory at Brussels.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Arlon			30.04	763.1	28.9	— 1.7	98	WSW			4		10			0.051	1.3	Snowing	Royal Observatory.
Brussels			30.01	762.3	32.2	0.1		WNW			2		10			0.278	7.06	Snowing	
Furnes			30.06	763.4	37.2	2.9	72	NW			6		7			0.035	0.9		
Maeseyck			29.90	759.5	36.3	2.4	87	W			4		5			0.091	2.3		

Note.—In the originals, the weather is occasionally given in general notes.

BRITISH SERIES

Furnished by the coöperation of Robert H. Scott, Esq., Director of the Meteorological Office, London, Alexander Buchan, Secretary of the Scottish Meteorological Society, Edinburgh, and the respective Observers.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Aberdeen			30.25	768.3	32.9	0.5		NW	19	8.5			6			0.090	2.28	*D. clouds	William Boswell.
Ardrossan			30.31	769.9	36	2.2		NNW			2		4					*D. clouds	William McNeil.
Armagh, Observatory			30.38	771.6	36.7	2.6		WSW	3	1.3			4					*D. clouds	S. Call, for Dr. Robinson.
Bidston (Liverpool Obs.)			30.30	769.6	35.0	1.7		NNW	11	4.9			1					Blue sky	John Hartnup.
Birr Castle, (Parsonstown)			30.37	771.4	40.4	4.7		SE			1		3					*D. clouds	J. Dreyer.
Bradford			30.26	768.6	32.3	0.2		NW			1		0			0	0	Blue sky	J. McLandsborough.
Bridgetown, (Barbados)			30.01	762.2	82.5	28.1		NE			1		5					*D. clouds	Sergt. J. F. Halanen, A.
Cambridge, Observatory			30.21	767.3	38.0	3.3		NNW			3		1					*D. clouds	H. Todd. [H. C.
Cardington			30.24	768.1	37.0	2.8		NW			3		0					Blue sky	John McLaren.
Carlisle																			T. Bell, for J. Cartmell.
Chatham, School M. E.			30.32	770.1	36.2	2.3		NE			5		6					Blue sky	Maj. C. N. Martin, R.E.
Dartmoor	28.84	732.5	30.42	772.7	34.0	1.1		N			3		5					*D. clouds	R. E. Power.
Davos Platz, (Switzerland)	24.62	625.3			14.0	—10.0	66	NE			2		4			0.288	7.31	*D. clouds	Francis Redford, M. A.
Donaghadee			30.32	770.1	38	3.3		NNE			4		0					Blue sky	J. Mac Gowan.
Dover			30.15	765.8	36	2.2		NNE			3		4					½ clouded	J. Costello.
Eccles, (near Manchester)			30.29	769.4	35.2	1.8		N	3.8	1.7								Blue sky	Thomas Mackereth.
Falmouth, Observatory			30.36	771.1	41.4	5.2		NE			1		7					Overcast	The Staff.
Fort Napier, (Natal)	27.65	702.3	29.88	758.9	74.8	23.8		E			2		8					*D. clouds	P'vt. G. Salmon, A. H. C.
Free Town, (Sierra Leone)			29.93	760.2	88.0	31.1		W			1		4					*D. clouds	
Galway, Queen's College			30.30	769.6	42	5.6		E			1		2					*D. clouds	Prof. A. H. Curtis.
Gibraltar, (Mediterranean)			30.24	768.1	63.0	17.2		W			2		0					Blue sky	Corpl. C. Aitken, A.H.C.
Glasgow, Observatory			30.29	769.4	33.2	0.7		W			2		6					*D. clouds	Lewis Stuart.
Great Yarmouth			30.10	764.5	37	2.8		NW			5		6					*D. clouds	G. T. Watson.
Greenwich, Royal Obs'y			30.24	768.1	37.2	2.9		N			4		2					*D. clouds	The Staff, for G. B. Airy.
Guernsey			30.31	769.9	41.5	5.3		NNW			2		5					*D. clouds	Dr. S. E. Hoskins.
Helston			30.34	770.6	44	6.7		N			4		2c			0	0	*D. clouds	M. P. Moyle.
Holyhead			30.33	770.4	38	3.3		NNE			3		2					Blue sky	John Tilston.
Kew, Observatory			30.25	768.3	36.5	2.5		NNW	15	6.7			9					Hazy	The Staff.
Kingstown			30.37	771.4	37	2.8		NNW			3		5					*D. clouds	George Mitchell.
Leicester Museum			30.25	768 3	35.3	1.8		NW			2		0					Blue sky	Wm. J. Harrison, F.G.S.
Malta, (Mediterranean)			29.84	757.9	55.2	12.9		NW			2		10					Overcast	Corp'l. P. Bravis, A.H.C.
Nairn			29.28?	743.7?	33	0.6		WNW			1		0					Clear	W. D. Penny.
Nassau, (Bahamas)			30.10	764.5	75.8	24.3		NE			1		6					*D. clouds	Surg. Maj. Henry.
Nottingham, Observatory			30.27	768.8	35.1	1.7		NNW			3		0			0	0	Blue sky	E. J. Lowe, F. R. S.
Oscott, St. Mary's College			30.27	768.8	34.1	1.1		NW			3		0					Blue sky	Rev. Stephen Whitty.
Oxford, Radcliffe Obs'y			30.26	768.6	35	1.7		NW			2		0					Blue sky	J. Lucas.
Plymouth			30.33	770.4	42	5.6		NW			3		7					*D. clouds	John Merrifield.
Roche's Point			30.35	770.9	38	3.3		E			2		2					Fine	W. Kennedy.
Saint Ann's Head			30.33	770.4	40	4.4		Calm			0		7					*D. clouds	John C. Walker.
Saint Helier, (Jersey)			30.32	770.1	43.0	6.1		N			3		5					½ clouded	A. P. Amy.
Sandwick Manse, (Orkneys)			30.24	768.1	31.8	— 0.1		NW	19	8.5			10					Overcast	Rev. C. Clouston, LL. D.
Scarborough																			F. Shaw.
Scutari Cemetery, (Turkey)			29.63	752.6	49.0	9.4		SW			4		9					Raining	Sergt. W. H. Lyne.
Sheffield			30.24	768.1	33.0	0.9		NNW			2		1			0	0	Blue sky	W. F. Cooper.
Silloth Rectory			30.29	769.4	36.3	2.4	85	N			1		2			0	0	*D. clouds	Rev. Francis Redford.
Stonyhurst, Observatory			30.28	769.1	30.9	— 0.6		NW			3							Blue sky	Rev. S. J. Perry.
Stornoway, Lews C., (Hebr.)			30.28	769.1	31	— 0.6		WNW			2		0					Blue sky	John Smith.
Stratfield Turgiss			30.27	768.8	35.8	2.1		N			2		0					Blue sky	Rev. Charles H. Griffith.
Thurso			30.22	767.6	34	1.1		NW			4		7					*D. clouds	John Trotter.
Truro, Royal Institution			30.34	770.6	46	7.8		N			4		8					Gloomy	W. Newcombe.
Valencia, Observatory			30.29	769.4	44.0	6.7		SE	40	17.9			4					*D. clouds	The Staff.
Sub-Series.																			
Calf of Man, (Isle of Man)																			Henry Mercer.
Cape Good Hope, Obs'y			29.77	756.1	78.7	25.9	60	NW	17	7.6		1	1						The Staff, for E. J. Stone.
Hobart Town, (Tasmania)			29.52	749.8	71.0	21.7	94	NW			1		10kn			0.01	0.3	Covered	Francis Abbott, F.R.A.S.
Leith, Restalrig Park			30.33	770.4	35.1	1.7		NW			2		4k			0	0	Fine	Andrew Gibb.
Mauritius, Observatory			29.94	760.5	80.7	27.1	69	SSW	9.2	4.1		7	2		SSW	0.04	1.0	Fine	C. Meldrum.
Melbourne, Observatory			29.83	757.7	61.8	16.6	97	W	10	4.5			10			1.36	34.5	Heavy rain	R. L. J. Ellery.
Monach L't-house, (Hebrides)																			J. Youngclause.
North Unst, (Shetland Is.)																			Robert Burnet.

Note.—Generally, the originals do not give the relative humidity, rain-fall, or distinction between upper and lower clouds. The originals give the wind direction to 32 points and weather by the Beaufort notation. The originals give the barometer for Aberdeen, Cardington, Freetown, Galway, Oxford, St. Helier, Sandwick, Scarborough, Stonyhurst, Leith, Monach and North Unst as read off and the amount of cloudiness for Stornoway by the scale 0 to 4. The wind-force is given by the scale 0 to 12 in the official series; 0 to 6 in the sub-series; except in lbs. per square foot for Greenwich and Hobart Town. The rain-fall is measured at Aberdeen at 10 a. m.; Bradford, 9 a. m.; Hobart Town, 7:30 a. m.; Nottingham, 6 p. m.; Mauritius, 9 a. m., local time. The elevation of Dartmoor is 1,460 feet, or 426.7 meters; Davos Platz, 5,1652 feet, or 1,556.02 meters; Fort Napier, 2,200 feet, or 670.6 meters. *Detached clouds.

By authority of the Minister of Foreign Affairs.

COSTA RICA SERIES.

Furnished by the coöperation of Senor Federico Maison, Director of the Central Office of Statistics and Meteorology.

San José																			

DANISH SERIES.

Furnished by the coöperation of Captain N. Hoffmeyer, Director of the Royal Danish Meteorological Institute at Copenhagen.

Copenhagen			29.72	754.8	22.3	— 5.4	66	NNW			4		2						
Fanöe			29.87	758.8	26.4	— 3.1	70	N			2		10						
Godthaab, (Greenland)			28.82	731.9	16.9	— 8.4	91	NNE			4		10						
Stykkisholm, (Iceland)			29.56	750.7	38.7	3.7	98	SE			8		10					Raining	
Thorshavn, (Faröe)			30.18	766.6	32.2	0.1	73	W			4		3						
Vestervig			29.80	757.0	30.6	— 0.8	88	NNW			4		8					Snowing	

Note.—The originals give the wind-force by the scale 0 to 6; occasionally, weather by Vienna symbols; no distinction between the amount of upper and lower clouds

FRENCH SERIES.

Furnished by the co operation of His Excellency, U. J. Le Verrier, Director of the Paris Observatory, and the respective Observers.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour	Wind. Velocity. Meters per second.	Wind. Force 0—10.	Clouds. Amount. Upp'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters	Weather	Observer.
Alençon	.....	.....	30.28	769.0	42.8	6	85	NW	.....	.....	2	.....	5k	.....	NW	0	0	Cloudy	Normal School.
Amiens	.....	.....	30.16	766.0	38.1	3.4	90	NW	.....	.....	4	.....	5	.....	NW	0.087	2.2	Cloudy	Normal School.
Avignon	.....	.....	30.14	765.6	41.0	5	39	N	.....	.....	6	.....	0	.....	.....	0	0	Clear	Normal School.
Bar-sur-Seine	.....	.....	30.19	766.8	34.9	1.6	67	NNE	.....	.....	4	.....	5ck	.....	W	0.110	2.8	Cloudy	C. Saillard.
Beaumette, (near Angers)	.....	.....	30.30	769.5	39.2	4.0	54	N	10.3	4.6	.....	.....	.....	.....	N	0	0	.....	Beaumette Observ'tory.
Beauvais	.....	.....	30.22	767.5	34.7	1.5	78	NW	.....	.....	4	.....	0	.....	.....	0.030	0.75	Clear	Normal School.
Besançon	.....	.....	30.24	768.2	29.8	— 1.2	.....	SSW	.....	.....	3	.....	0	.....	.....	0.346	8.8	Clear	Normal School.
Bourg en Bresse	.....	.....	30.27	768.8	32.5	0.3	89	N	.....	.....	6	.....	10k	.....	NW	0.059	1.5	Covered	Normal School.
Bourges	.....	.....	30.27	768.8	37.0	2.8	58	SW	.....	.....	2	.....	5	.....	NW	0	0	Cloudy	Normal School.
Brest	.....	.....	30.28	769.2	45.1	7.3	60	NNE	.....	.....	3	.....	5	.....	N	0.059	1.50	.....	Naval Observatory.
Carcassonne	.....	.....	30.12	765.1	49.3	9.6	50	W	.....	.....	2	.....	2	.....	E	0	0	Slightly cl'dy	Normal School.
Caen	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Chartres	.....	.....	30.26	768.5	36.0	2.2	64	N	.....	.....	4	.....	8	.....	S	0	0	.....	Normal School.
Châlons-sur-Marne	.....	.....	30.15	765.7	35.1	1.7	56	W	.....	.....	4	2c	.....	E	.....	0.079	2.0	Slightly cl'dy	Normal School.
Clermont	.....	.....	30.26	768.7	33.1	0.6	90	N	.....	.....	3	.....	8	.....	NW	0.146	3.7	.....	Puy de Dome Obs'y.
Commercy	.....	.....	30.10	764.5	32.5	0.3	94	W	.....	.....	8	.....	2n	.....	W	0	0	Slightly cl'dy	Normal School.
Commune de Gréasque*	.....	.....	30.04	762.9	39.6	4.2	34	NW	.....	.....	8	.....	2	.....	NW	0	0	.....	M. Kina.
Grenoble	.....	.....	30.21	767.2	32.9	0.5	64	NW	.....	.....	6	.....	2k	.....	E	0.04	1.	Slightly cl'dy	Normal School.
La Roche-sur-Yon	.....	.....	30.32	770.0	42.8	6.0	53	N	.....	.....	6	.....	5	.....	SE	0.031	0.8	Cloudy	Normal School.
Le Mans	.....	.....	30.31	769.8	36.3	2.4	79	NE	.....	.....	4	.....	5	.....	NW	0.030	0.75	Cloudy	Normal School.
Lons-Le-Saulnier	.....	.....	30.18	766.5	30.6	— 0.8	96	NW	.....	.....	4	.....	2	.....	SE	Inap.	Inap.	Snowing	Normal School.
Lorient	.....	.....	30.36	771.1	46.4	8.0	86	N	.....	.....	1	.....	5	.....	N	0.012	0.3	Cloudy	Naval Observatory.
Mâcon	.....	.....	30.33	770.4	31.3	— 0.4	.....	Calm	.....	.....	0	.....	5	.....	N	0	0	Cloudy	Normal School.
Metz	.....	.....	30.09	764.3	29.5	— 1.4	87	WSW	.....	.....	6	.....	10	.....	.....	0.138	3.5	.....	M. Schuster.
Mirecourt	.....	.....	30.19	766.7	29.1	— 1.6	46	SSW	.....	.....	2	.....	2	.....	NNE	0	0	Slightly cl'dy	Normal School.
Nismes	.....	.....	30.04	763.0	43.5	6.4	67	N	.....	.....	6	.....	.....	.....	.....	0	0	.....	Normal School.
Orleans	.....	.....	30.17	766.4	34.9	1.6	74	NNW	.....	.....	2	.....	10	.....	NW	0.008	0.2	Covered	Normal School.
Paris, Observatory	.....	.....	30.23	767.7	35.8	2.1	64	WNW	.....	.....	4	.....	5k	.....	NW	0.022	0.55	Cloudy	National Observatory.
Parthenay	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Privas	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School
Rochefort, Observatory	.....	.....	30.23	767.7	34.5	1.4	73	N	.....	.....	2	.....	5	.....	N	0	0	Cloudy	Naval Observatory.
Rouen	.....	.....	30.35	770.8	48.7	9.3	61	NNW	.....	.....	3	.....	5	.....	S	0	0	½ covered	Normal School.
Saint Lo	.....	.....	30.24	768.1	38.8	3.8	92	NW	.....	.....	3	.....	1	.....	NW	0.059	1.5	Clear	Normal School.
Tarbes	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Normal School.
Villefranche	29.19	741.4	30.30	769.7	45.7	7.6	89	WNW	.....	.....	1	.....	10	.....	.....	0.24	6.	Covered	Normal School.
	.....	.....	30.21	767.2	34.9	1.6	72	N	.....	.....	3	.....	2	.....	N	0.071	1.8	Slightly cl'dy	Normal School.
SUB-SERIES.																			
Fort de France, Martinique	.....	.....	29.90	759.4	78.8	26	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	L'Abbé Marchési.
Marseilles	.....	.....	30.01	762.2	44.1	6.7	71	NNW	.....	.....	6	.....	1	.....	.....	0	0	Clear	Marseilles Observatory.
Mont-Louis	24.84	630.8	30.15	765.8	33.6	0.9	55	W	20.5	9.17	.....	.....	5	.....	W	0	0	.....	—. Falguère.
Montsouris, Paris	.....	.....	30.20	767.0	36.5	2.5	52	NNW	.....	.....	3	.....	6	.....	NNW	0.031	0.8	.....	Montsouris Observatory
Perpignan	.....	.....	30.19	766.7	47.8	8.8	54	N	20.5	9.17	.....	.....	9	.....	NW	0	0	.....	Dr. Fines.
Pic du Midi, (Summit,) H. P.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. Baylac.
Pic du Midi, (Plantade,) H. P.	22.46	570.6	.....	.....	20.8	— 6.2	.....	N	.....	.....	1	.....	10	.....	.....	0.748	19.0	Snowy	General de Nansouty.
Saint Maur, (near Paris)	.....	.....	30.21	767.3	38.1	3.4	51	NW	.....	.....	3	...	6	.....	.....	0.067	1.7	Fair	E. Renou.
Toulouse	.....	.....	30.28	769.2	44.8	7.1	47	NW	.....	.....	4	.....	2	.....	.....	Inap.	Inap	.....	Toulouse Observatory.
Tours	.....	.....	30.30	769.5	40.3	4.6	51	NW	.....	.....	2	.....	7	.....	NW	0.012	0.3	.....	C. Marquet.
Versailles, (near Paris)	.....	.....	30.21	767.3	37.4	3.0	55	NNW	.....	.....	6	.....	8	.....	.....	0.052	1.33	Fair	Dr. A. Bérigny.
Zi-Ka-Wei, (near Shanghai)	.....	.....	30.28	769.0	44.6	7.0	65	SW	20.1	9.0	.....	.....	10	.....	SW	0	0	.....	Marc Dechevrens, S. J.
	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

NOTE.—Generally, the originals give the wind-force by the scale 0 to 7; no distinction between upper and lower clouds, and, in the official series, the amount by the scale 0 to 4; the rain-fall as measured at 7, 8 or 9 a. m., local time; at Clermont, 9 a. m. of the following day; the weather in general terms as published. The elevation of Clermont is 388 meters, or 1,272.9 feet; Commune de Gréasque, 322 meters, or 1,056.4 feet; Tarbes, 308 meters, or 1,010 feet; Mont-Louis, 1,586.40 meters, or 5,204.8 feet; Pic du Midi, (Summit,) 2,577 meters, or 8,480.1 feet; Pic du Midi, (Plantade,) 2,366 meters, or 7,762.6 feet. In correcting the Mont-Louis barometric observations for altitude, the constant 135. millimeters has been added. *Bouches-du-Rhône

GERMAN SERIES.

Furnished by the coöperation of Professor Dr. G. Neumayer, Director of the German Naval Observatory, Hamburg.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour	Wind. Velocity. Meters per second.	Wind. Force 0—10.	Clouds. Amount. Upp'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters	Weather	Observer.
Bamberg	.....	.....	29.74	755.4	25.7	— 3.5	89	W	.....	.....	6	.....	3	W	.....	0.118	3.0	.....	Prof. T. Hoh.
Berlin	.....	.....	29.75	755.7	27.9	— 2.3	66	SW	.....	.....	3	.....	10	.....	.....	0.417	10.6	.....	Prof. Arndt.
Breslau	.....	.....	29.65	753.0	27.9	— 2.3	75	NW	.....	.....	3	.....	8	.....	.....	0.043	1.1	Light snow	Royal University Obs'y.
Carlsruhe	.....	.....	29.96	760.9	30.6	— 0.8	69	SW	.....	.....	10	.....	10	.....	.....	0.370	9.4	.....	A. Senz.
Cassel	.....	.....	29.78	756.4	31.5	— 0.3	78	SSE	.....	.....	4	.....	5	W	.....	0.220	5.6	Snowing	Dr. H. Möhl.
Crefeld	.....	.....	29.88	758.9	36.7	2.6	53	N	.....	.....	4	.....	3	.....	.....	0.20	5.	.....	Director Lose.
Emden	.....	.....	30.04	762.9	30.0	— 1.1	91	NNE	.....	.....	3	.....	0	.....	.....	0	0	.....	Prof. Prestel.
Frankfort on the Main	.....	.....	29.80	757.0	29.1	— 1.6	95	WNW	.....	.....	4	.....	10	.....	.....	0.028	0.7	Snowing	Physical Society.
Friedrichshafen	28.59	726.1	30.10	764.4	29.8	— 1.2	84	WNW	.....	.....	10	.....	7	.....	.....	0.051	1.3	Heavy snow	M. Wilhelm.
Hamburg	.....	.....	29.81	757.1	26.6	— 3.0	61	N	.....	.....	4	.....	7k	NNW	.....	0.197	5.0	Light snow	Captain F. Hegemann.
Kiel	.....	.....	29.82	757.3	27.9	— 2.3	68	NW	.....	.....	4	.....	6	.....	.....	0	0	.....	Prof. G. Karsten
Königsberg, (Prussia)	.....	.....	29.49	749.1	25.3	— 3.7	81	N	.....	.....	2	.....	5	.....	.....	0.075	1.9	Snowing	Prof. E. Luther.
Köslin	.....	.....	29.62	752.4	23.0	— 5.0	.....	Calm	.....	.....	0	.....	10	.....	.....	0.807	20.5	.....	H. Müller.
Leipsic	.....	.....	29.74	755.5	28.4	— 2.0	96	WSW	.....	.....	2	.....	10	.....	.....	0.028	0.7	Snowing	Prof. Bruhns.
Memel	.....	.....	29.51	749.5	21.4	— 5.9	74	NNE	.....	.....	3	.....	5k	NE	.....	0.008	0.2	Snow-shower	Reinbrecht & Skalweit.
Münster	.....	.....	29.84	758.0	34.3	1.3	91	NW	.....	.....	2	.....	10	.....	.....	0.252	6.4	.....	Prof. F. Heis.
Neufahrwasser	.....	.....	29.58	750.1	25.0	— 3.9	66	NNW	.....	.....	5	.....	5	.....	.....	0.028	0.7	.....	A Lothe.
Posen	.....	.....	29.63	752.5	35.6	2.0	88	NW	.....	.....	5	.....	6	.....	.....	0.098	2.5	.....	Dr. Magener.
Strassburg, (in Alsace)	.....	.....	30.07	763.6	32.2	0.1	100	W	.....	.....	3	.....	10	W	.....	0.043	1.1	.....	Dr. Schur.
Stuttgart	.....	.....	29.94	760.5	29.7	— 1.3	80	W	.....	.....	6	.....	8	.....	.....	0.031	0.8	Snowing	Prof. Schoder.
Thorn	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Dr. Hasenbalg.
Treves, (Trier)	.....	.....	29.87	758.6	32.9	0.5	64	W	.....	.....	8	.....	5	.....	.....	0.004	0.1	.....	Prof. Flesch.
Weissenburg, (Bavaria)	28.31	719.1	29.91	759.6	23.9	— 4.5	100	WSW	.....	.....	5	.....	10	.....	.....	0.059	1.5	Snowing	Dr. von Bebber.
Wustrow, Naval School	.....	.....	29.80	757.0	24.6	— 4.1	82	N	.....	.....	5	.....	7	.....	.....	0	0	.....	E. F. Schütz.
GERMAN NAVAL SERIES.																			

NOTE.—The elevation of Friedrichshafen is 413.4 meters, or 1,356.3 feet; Weissenburg, 431 meters, or 1,414.0 ft. In the originals the distinction between the amount of upper and lower clouds is not made. It is not always certain that the remarks in the weather column refer to the moment of observation.

GREEK SERIES.

Furnished by the coöperation of Professor Dr. J. F. Julius Schmidt, Director of the Royal Observatory at Athens.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Athens	.....	.....	29.76	756.0	59 7	15.4	.....	W	.....	.....	Strong	... .	.....	.....	.....	.....	.....	Clear.	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

Note.—The originals give the barometer corrected, but not reduced to sea-level; occasionally the kind of clouds; the weather as published. They omit the humidity, wind-force, amount of cloudiness and rain-fall.

INDIAN SERIES.

Furnished by the coöperation of H. F. Blanford, Meteorological Reporter to the Government of India.

Kurrachee	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Deesa	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Bombay	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Poona	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Lahore	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Belgaum	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Bangalore	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Rorkee	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Agra	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Trichinopoly	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Nagpur	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Madras	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Lucknow	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Allahabad	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Patna	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Hazaribagh	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Cuttack	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Calcutta (Alipore)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Goalpara	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Chittagong	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Sibsagar	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Rangoon	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Jubbulpore	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
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.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

ITALIAN SERIES.

Furnished by the coöperation of His Excellency the Minister of Agriculture, Industry and Commerce, and the respective Observers.

Udine	.....	.....	29.73	755.1	41.0	5 0	18	NE	8.1	3.6	.....	.....	9	.....	.....	0	0	.....	Prof. Giovanni Clodig.
Stelvio	21.71	551.5	.....	.....	— 2.7	—19.3	... ...	N	.....	.....	4	.....	3	SSE	.....	0.008	0.2	.....	Signora Ernesta Manfredi.
Valdobbia	21.78	553.3	.....	.....	6.4	—14.2	74	WNW	.....	.....	4	.....	4	N	.....	0	0	.....	Ab. Dom. Morgini.
Padua	.....	.....	29.72	754.9	41.4	5.2	72	N	10.6	4.7	.....	.....	10	N	.....	0.(7	1.9	Raining.....	Prof. Dott. Lorenzoi.
Vicenza	.....	.....	29.73	755.2	41.7	5.4	50	N	1 8	0.8	.....	.....	8	W	.....	(.)91	2.3	Raining.....	Conte Alm. Da Schio.
Verona	.....	.....	29.74	755.5	41.9	5.5	68	W	.....	.....	1	.....	10	.....	.....	0	0	.....	Dott. B. Bertoncelli.
Bergamo	28.41	721.6	29.75	755.6	37.4	3.0	30	NW	.....	.....	8	.....	2	.....	.....	0	0	.....	Prof Trionfini Carlo.
Domodossola	.....	.....	29.81	757.2	40.6	4.8	25	N	.....	.....	8	.....	1	.....	.....	0	0	.....	Prof. Giuseppe Calza.
Milan	.....	.....	29.83	757.6	40.6	4.8	31	N	.....	.....	6	.....	2	NNW	.....	0	0	.....	Ab. Gio. Capelli
Pavia	.....	.....	29.82	757.3	39.9	4.4	21	W	.....	.....	8	.....	4	NW	.....	0	0	.....	Prof. Gio. Cantoni.
Moncalieri	.....	.....	29.87	758.6	41.9	5.5	20	NNW	24.2	10.8	.....	.....	3	.....	.....	0	0	.....	Prof P. F. Denza.
Mondovi	27.87	707.9	29.81	757.2	38.3	3.5	7	NW	.....	.....	8	.....	1	.....	.....	0	0	.....	Prof. D. C. Bruno.
Porto Maurizio	.....	....	29.77	756.2	50.2	10.1	6	N	.....	.....	8	.....	4	.....	.....	0	0	.....	Prof. L. Vassallo.
Genoa	.....	.....	29.76	756.0	46.9	8.3	5	N	15.4	6.9	.....	.....	6	N	.....	0	0	.....	Prof. G. M. Garibaldi.
Piacenza	.....	.....	29.80	756.8	42.1	5.6	17	NW	26.2	11.7	.....	.....	6	NW	.....	0	0	.....	Dott. G. Manzi.
Parma	.....	.....	29.78	756.5	43.2	6.2	41	WNW	.....	.....	6	.....	9	.....	.....	0	0	.....	Prof. P. Pigorini.
Florence	.....	.....	29.69	754.0	46.4	8.0	71	NE	.....	.....	2	.....	10	.....	.....	.....	.....	Sleeting.....	Cav. F. Meucci.
Leghorn	.....	.....	29.65	753.2	52.2	11.2	55	NW	13.0	5.8	.....	.....	6	N	.....	0	0	.....	Prof. P. Monte.
Siena	28.42	721.9	29.65	753.2	37.8	3.2	86	NNW	10.5	4.7	.....	.....	10	N	.....	0.028	0.7	Light rain	Prof. L. Toscani.
Urbino	28.12	714.2	29.72	754.8	36.5	2.5	79	SW	.....	.....	2	.....	10	.....	.....	0	0	.....	Prof. P. Serpieri.
Pesaro	.....	.....	29.67	753.7	46.2	7.9	71	SW	9.8	4.4	.....	.....	10	SW	.....	0	0	.....	Prof. Luigi Guidi.
Ancona	.....	..... .	29.68	753.9	42.4	5.8	76	W	.....	.....	4	.....	10	.....	.....	0.026	0.5	Light rain....	Prof. F. De— Rosis.
Grosseto	.....	.....	29.68	753.8	49.6	9.8	75	NW	.....	.....	6	.....	3	NNW	.....	0.028	0.5	Light rain ...	Avv. P. Ponticelli.
Rome	.....	.....	29.70	754.3	54.9	12.8	44	SW	8.7	3.9	.....	.....	4	W	.....	0.024	0.6	Light rain...	Prof's. P. Secchi & L. Respighi.
Naples, O. U	.....	.....	29.78	756.5	56.5	13.6	46	WSW	.....	.....	6	.....	8	SW	.....	0.166	4.3	Raining.....	Prof. L. Palmieri.
Lecce	.....	...	29.89	759.3	52.5	11.4	56	W	11.9	5.3	.....	.....	1	.....	.....	0	0	.....	Prof. C. De—Giorgi.
Cosenza	.....	.....	29.94	760.4	45.5	7.5	83	NE	4.3	1.9	.....	.....	10	....	.....	0.441	11.2	Thunder-storm.	Prof. F. D. Conti.
Cagliari	.....	.....	29.93	760.1	52.2	11.2	45	NW	.....	.....	4	.....	10	NW	.....	0	0	.....	Prof. A. Pacinotti.
Riposto, (Sicily)	.....	.....	29.85	758.3	59.4	15.2	47	SE	.....	.....	2	.....	3	SE	.....	0	0	.....	Prof. F. Cuffero.
Palermo	.....	.....	29.90	759.5	56.7	13.7	39	WSW	5.6	2.5	.....	.....	2	.....	.....	0	0	.....	Prof. G. Cacciatore.
Caltanissetta	27.98	710.6	29.97	761.1	49.6	9.8	55	W	.....	.....	6	.....	5	NE	.....	0	0	.....	Prof. A. Pagani.
Siracusa	.....	..	29.88	758.9	60.1	15.6	40	W	.....	.....	6	.....	5	W	.....	0	0	.....	Prof. V. Giuliano.
Sub-Series.																			
Naples, S. R	.....	.....	29.80	756.8	52.2	11.2	52	WNW	15.4	6.9	.....	.....	8	NW	.....	0.059	1.5	... .	Prof. F. Brioschi
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

Note.—The originals give the wind-force by the scale 0 to 4, or the velocity in kilometers per hour; generally, no distinction between upper and lower clouds; occasionally the weather by the Vienna symbols. The elevation of Stelvio is 2,543.0 meters, or 8,342.9 feet; Valdobbia, 2,548.0 meters or 8,359.3 feet; Bergamo, 379.6 meters, or 1,245 3 feet; Mondovi, 556 meters, or 1,824.2 feet; Siena, 348.5 meters, or 1,143.3 feet; Urbino, 451 meters, or 1,479.7 feet; Caltanissetta, 570.3 meters, or 1,871.0 feet.

JAPANESE SERIES.

Furnished by the coöperation of the Imperial University of Tokei, Japan.

Tokei	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Prof. P. V. Veeder.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
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.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

Note.—The originals give the amount of cloudiness by the scale 0 to 4 without distinguishing between upper and lower clouds. The rain-fall is measured at 7 a. m., local time.

By authority of the SECRETARY OF PUBLIC WORKS.

MEXICAN SERIES.

Furnished by the coöperation of Senor Mariano Barcena, Director of the Central Meteorological Observatory in the City of Mexico.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Mexico																			Mariano Barcena.
																			Vicente Reyes.
																			Miguel Perez.

(Engineers in charge.)

NOTE.—The elevation of Mexico is 2,290 meters, or 7,512.9 feet. The rain-fall is measured at 6 a. m., local time.

NETHERLANDS' SERIES.

Furnished by the coöperation of Professor Buys Ballot, Director of the Royal Meteorological Institute of the Netherlands at Utrecht.

Flushing			30.04	762.9	36.0	2.2		N			6					0	0		
Groningen			29.89	759.1	30.6	— 0.8										0.327	8.3		
Helder			29.95	760.7	36.7	2.6		N			6					0.122	3.1		
Utrecht			29.89	759.1	39.2	4.0	78	NW			4		5			0.205	5.2	Cloudy	

NOTE.—The originals give the wind-pressure in kilograms per square meter; for Utrecht, they give the weather as published, from which the amount of cloudiness is taken by the scale 0 to 4, without distinguishing between upper and lower clouds. It is assumed that the barometer readings have been reduced to sea-level.

NORWEGIAN SERIES.

Furnished by the coöperation of Professor H. Mohn, Director of the Royal Norwegian Meteorological Institute at Christiania.

Bergen			29.89	759.1	25.9	— 3.4	82	NNW	24.8	11.1			10			0.004	0.1		
Bröno			29.56	750.9	23.0	— 5.0	66	W	17.9	8			8			0.256	6.5		
Christiania			29.72	754.9	24.8	— 4.0	91	N	7.0	3.4			10			0	0		
Tromsö			29.46	748.2	42.8	6.0	74	S	4.5	2			9			0	0		

NOTE.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols. The cloudiness and weather at Bergen refer to 2h., p. m., local time, instead of 1h., 4 min.

PORTUGUESE SERIES.

Furnished by the coöperation of J. C. de Brito Capello, Director of the Meteorological Observatory of the Infante Don Luiz at Lisbon.

Angra, (Azores)			29.76	755.9	60.4	15.8	96	SSW	9.4	4.2			10			0.984	25.0		Dr. J. A. Sampaio
Campo Major			30.23	767.9	59 0	15.0	89	NNW	3.8	1.7			3	NNW		0	0		Dr. A. M. R. dos Santos.
Funchal, (Madeira)			30.30	769.5	62 2	16.8	50	ESE	3.8	1.7			9			0	0		Capt. D. A. de Cunha.
Lisbon			30.30	769.7	57.0	13.9	57	NNE	11.2	5.0			5			0	0		The Observatory.
Ponta Delgada, (Azores)			29.87	758.6	60.3	15.7	96	S	22.4	10 0			10			0.917	23.3	Raining	

NOTE.—The originals give the wind-velocity in kilometers per hour, occasionally, the weather by the Vienna symbols; the amount of cloudiness without distinguishing between upper and lower clouds; the barometer corrected but not reduced to sea-level. The rain-fall at Lisbon is measured at noon, instead of 0 h. 6 m., p. m.

RUSSIAN SERIES.

Furnished by the cooperation of Professor H. Wild, Director of the Imperial Central Physical Observatory of Russia, at St. Petersburg.

Warsaw			29.41	747.0	27.5	— 2.5	94	WNW	27	12			10					Snowing	Astronomical Obs.
Wilna			29.47	758.5	29.6	— 1.4	79	SSE	2	1			9						Astronomical Obs.
Dorpat			29.43	747.4	17.1	— 8.3	79	SW	11	5			10					Snowing	Physical Cabinet.
St. Petersburg			29.34	745.1	14.4	— 9.8	79	SW	13	6			10						Central Physical Obs.
Kuopio			28.83	732.3	14.0	—10.0	100	WNW	13	6			10					Snowing	Ch. Forsten.
Kieff			29.58	751.4	31.3	— 0.4	96	SSE	2	1			10						Physical Cabinet.
Nikolaiev			29.48	748.7	35.8	2.1	94	NNW	13	6			10						Kurdakof.
Kertch			29.63	752.5	51.3	10.7	77	SSW	11	5			6						Lagorio.
Moscow			29.61	752.0	28.4	— 2.0	70	S	4	2			0						Meteorological Obs.
Lugan			29.54	750.3	36.9	2.7	91	Calm	0	0			5			Bla k	Blank		Meteorological Obs.
Archangel			29.13	740.0	24.4	— 4.2	95	Calm	0	0			10						Ogorodnikof.
Tiflis	28.39	721.2	29.80	756.8	57.9	14.4	39	NNE	13	6			2						Physical Observatory.
Astrakhan			29.58	751.3	36.3	2.4	93	W	7	3			10						Sebastianof.
Kasan			29.50	749.2	30.6	— 0.8	89	Calm	0	0			0						Physical Cabinet.
Orenburg			29.82	757.3	33.3	0.7	89	SE	13	6			10						Tschernischel.
Ekaterinburg	28.83	732.3	29.81	757.2	29.3	— 1.5	64	SE	7	3			10						Meteorological Obs.
Nukuss			29.68	753.8	68.5	20.3	40	SSE	18	8			10						
Kasaly																			Bobrof.
Tashkend	28.53	724.6	30.23	767.8	57.9	14.4	43	N	4	2			3						Michelson.
Barnaul			30.14	765.5	27.5	— 2.5	94	SW	25	11			10						Meteorological Obs.
Yeniseisk			29.71	754.7	25.7	— 3.5	80	SSW	11	5			10						Marks.
Irkutsk																			Usolzef.
Peking, (China)			30.19	766.7	33.6	0.9	65	Calm	0	0			7						Physical Observatory.
Nertchinsk																			Meteorological Obs.
Vladivostock																			
Nikolaievsk, on the Amoor																			

NOTE.—The originals give the amount of cloudiness without distinguishing between upper and lower clouds; occasionally, the weather by the Vienna symbols; they omit the rain-fall. The elevation of Tiflis is 469 meters, or 1,541.8 feet; Ekaterinburg, 306.4? m., or 1,005.2? ft.; Tashkend, 494.2? m., or 1,621.3? ft.; Irkutsk, 492 m., or 1,286 ft. Nertchinsk, 592.0? m., or 1,942.2? ft.

SPANISH SERIES.

Furnished by the coöperation of Antonio Aguilar, Director of the Royal Observatory at Madrid, and of Don Cecilio Pujazon, Captain R. N. Director of the Naval Observatory at San Fernando.

Madrid			30.22	767.6	54.5	12.5	44	N	3.7	1.67		2	1	N		0	0	Light clouds	Royal Observatory.
San Fernando			30.28	769.2	56.5	13.6	63	WNW	15.4	6.9		0	2		WNW	0	0		Naval Observatory.

NOTE.—The originals give the weather in general terms, as published; rain-fall for San Fernando from preceding to following midnight; wind-velocity for Madrid in kilometers per hour.

SWEDISH SERIES.

Furnished by the coöperation of Professor R. Rubenson, Director of the Royal Swedish Meteorological Institute, at Stockholm, and of Dr. H. H. Hildebrandsson, Chief of the Meteorological Division of the Upsala Observatory.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain-fall or melted snow in the past 24 hours. Inches.	Rain-fall or melted snow in the past 24 hours. Millimeters.	Weather.	OBSERVER.
Haparanda			29.28	743.8	18.7	— 7.4	95	N			4		7			0	0		
Umea																			
Hernosand			29.49	749.0	21.9	— 5.6	93	NW			4		2			0	0		
Stockholm			29.52	749.9	19.0	— 7.2	90	NW			2		4			0.016	0.4		
Wisby			29.57	751.0	18.7	— 7.4	83	N			6		5			0.031	0.8		
Sub-Series.																			
Upsala			29.54	750.4	17.6	— 8.0	53	NW	2.9	1.3			0			0.062	0.04		Dr. Hildebrandsson.

Note.—The originals give the wind-force by the scale 0 to 6, and Upsala also velocity in meters per second; occasionally, the weather by the Vienna symbols, or in general terms; no distinction between the amount of upper and lower clouds. The rain-fall is measured at 8 a. m., local time.

SWISS SERIES.

Furnished by the coöperation of Professor R. Wolf, Director of the Observatory at Zurich, and of Professor E. Plantamour, Director of the Observatory at Geneva.

Geneva	28.71	729.1	30.21	767.3	28.9	— 1.7	94	NW			2		0			0.024	0.6	Clear	The Observatory.
Zurich	28.42	721.9	30.15	765.9	27.7	— 2.4	60	W			2		3			0.039	1.0	Fair	The Observatory.

Note.—For Geneva the corresponding departures from the normal values are: Barometer, +3.6 mm; Thermometer, —7.1 cent.; Relative Humidity, +27 per cent.

Note.—The rain-fall is measured at Zurich at 7 a. m. on the following day. The originals give the barometer corrected but not reduced to sea-level; the wind-force by the scale 0 to 4 for Zurich; the amount of cloudiness without distinguishing between upper and lower clouds; the weather in general terms. The elevation of Geneva is 408 meters, or 1,339 feet, and that of Zurich 470 meters, or 1,542 feet.

TURKISH SERIES.

Furnished by the coöperation of A. Coumbary, Effendi, Director of the Central Observatory at Constantinople, and of Professor C. V. A. Van Dyck, Superintendent of the Lee Observatory at Beirut.

Constantinople																			
Fao, (Persian Gulf)																			
Salonica																			
Valona																			
Varna																			
Sub-Series.																			
Beirut, (Syria,) Lee Obs'y			29.95	760.8	67.5	19.7	70	SW			2		1ks		SW	0.06	1.5	Detached clouds.	Prof. C. V. A. Van Dyck.

Note.—The originals give the wind-force by the scale 0 to 7, (except Beirut, by the scale 0 to 12, and Constantinople velocity in meters per second;) the weather in general terms as published; no distinction between upper and lower clouds, and, except Constantinople and Beirut, the amount by the scale 0 to 4. It is assumed that the barometer is reduced to sea-level.

CANADIAN SERIES.

Furnished by the coöperation of Professor G. T. Kingston, Director of the Magnetic Observatory at Toronto, and Superintendent of the Meteorological Office of the Dominion of Canada, and the respective Observers. Those marked with a star (*) are also telegraphed daily to the office of the Chief Signal Officer, U. S. Army.

Bathurst, N. B			29.92	760.0	16.6	— 8.5	58	NW	5.7	2.5			5						Hon. J. Ferguson.
Brockville, Ontario			30.18	766.6	25	— 3.9		Calm	0	0		0	2s		E	0	0	Fair	W. R. Bigg.
*Chatham, N. B			29.97	761.2	15	— 9.4	69	NW	4	1.8		0	0			0	0	Clear	G. A. Blair.
Charlottetown, P. E. Island			29.92	760.0	14	—10.0	68	NW	8	3.6		0	0			0	0	Clear	H. J. Cundall, C. E.
Cornwall, Ontario			30.16	766.1	18.3	— 7.6	78	NE			1	7ck	0	NE		0	0	Fair	James Smith, M. A.
Dalhousie, N. B			29.99	761.7	9.3	—12.6	77	W			1					0	0	Clear	H. A. Johnson.
Esquimault, B. C			30.09	764.3	41.1	5.1	100	N				10cs	0			0	0	Cloudy	W. H. Bevis.
*Father Point, Quebec			30.02	762.5	14	—10.0	62	Calm	0	0		2ck	5s	N	N	0	0	Fair	J. McWilliams.
Fredericton, N. B			30.07	763.8	2.6	—16.3		Calm	0	0		0	0			0	0	Clear	Prof. Harrison.
*Fort Garry, Manitoba			30.28	769.1	10	—12.2	94	SW	7	3.1		0	0			0	0	Clear	James Stewart.
Goderich, Ontario			30.29	769.4	23.7	— 4.6	79	NW			1	3k	0	N		0	0	Fine	H. J. Strang, M. A.
Granton, Ontario	29.09	738.9	30.29	769.4	17.4	— 8.1		Calm			0	0	0			0	0	Clear	James Grant.
*Halifax, N. S			29.94	760.5	18	— 7.7	78	NW	4	1.8		0	0			0	0	Clear	F. Allison, M. A.
Hamilton, Ontario			30.29	769.4	27.2	— 2.7	71	W			2	0	0			0	0	Bright	G. Dickson.
Heart's Content, N. F			29.36	745.7	8	—13.3	100	NE			2	0	0			0	0	Fine	E. Weedon.
*Kingston, Ontario			30.24	768.1	26	— 3.3	94	W	1	0.4		5cs	0	NE		0	0	Fair	S. Woods, M. A.
*Montreal, Quebec			30.15	765.8	15	— 9.4	86	NW	1	0.4		2cs	Fog			0	0	Cloudy	C. H. McLeod, C. E.
*Ottawa, Ontario			30.15	765.8	15	— 9.4	78	E	2	0.9		10ck	0	NE		0	0	Cloudy	J. B. Haney.
*Parry Sound, Ontario			30.25	768.3	8	—13.3	89	Calm	0	0		2c	0			0	0	Clear	Rev. R. Mosley.
Port Dover, Ontario			30.27	768.8	25	— 3.9	75	NW	7	3.1		0	0			0	0	Clear	H. Morgan.
Port Hastings, N. S			29.89	759.2	16.8	— 8.4		NW								0	0	Fine	Peter Grant.
Port Stanley, Ontario			30.27	768.8	22	— 5.6	85	NW	4	1.8		0	0			0	0	Clear	M. Payne.
*Quebec, Quebec			30.12	765.0	16	— 8.9	66	SW	2	0.9		0	0			0	0	Clear	Capt. Ashe, R. N.
*Rockliffe, Ontario			30.22	767.6	10	—12.2	89	NW	12	5.4		5cs	0	NW		0	0	Fair	
St. John, N. B			30.07	763.8	15	— 9.4	82	NW	4	1.8		0	0			0	0	Clear	G. Murdoch, C. E.
*Saugeen, Ontario			30.23	767.8	27	— 2.8	88	Calm	0	0		2cs	0			0	0	Clear	K. Stewart.
Stayner, Ontario			30.25	768.3	24	— 4.4	75	NW	4	1.8		2c	0	N		0	0	Fair	R. J. Cole.
Stratford, Ontario	28.91	734.3	30.29	769.4	16.5	— 8.6	93	NW	2	0.9		0	0			0	0	Fine	C. J. MacGregor, M. A.
*Sydney, C. B			29.82	757.4	20	— 6.7	66	W	5	2.2		0	0			0	0	Clear	T. C. Hill.
*Toronto, Ontario			30.25	768.3	24	— 4.4	72	NW	9	4.0		0	2s		NW	0	0	Clear	Magnetic Observatory.
Woodstock, Ontario			30.28	769.1	20.4	— 6.4	95	NW	4	1.8		0	0			0	0	Clear	J. Montgomery.
Sub-Series.																			
St. Johns, Newfoundland			29.42	747.3	6.0	—14.4		NW				10k	10s			0.04	1.0	Fair	John Delany.

Note.—The originals for Brockville, Charlottetown, Port Dover, Port Stanley, Stayner, St. Johns, N. F. and those telegraphed, give the amount of cloudiness by the scale 0 to 4. The elevation of Granton is 1,015 feet, or 309.4 m.; Stratford, 1,182 feet, or 360.3 m

UNITED STATES SERIES.

Furnished by the coöperation of Bvt. Brig. Gen. Albert J. Myer, Chief Signal Officer, U. S. Army.

STATIONS.	Barometer. Corrected for instrum'tal error and temperature. Inches.	Barometer. Corrected for instrum'tal error and temperature. Millimeters.	Barometer. Reduced to sea-level. Inches.	Barometer. Reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Upper. 0—10.	Clouds. Amount. Low'r 0—10	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	Rain fall or melted snow in the past 24 hours. Inches	Rain fall or melted snow in the past 24 hours. Millimeters.	Weather.	Observer.
Albany, N. Y.	.....	.....	30.20	767.1	23	— 5.0	86	Calm	0	0	.....	.....	8ks	.....	W	0	0	Fair	
Alpena, Mich.	.....	.....	30.30	769.6	17	— 8.3	67	NW	10	4.5	.....	0	0	.....	.....	0	0	Clear	
Atlantic City, N. J.	.....	.....	30.20	767.1	34	1.1	90	NE	2	0.9	.....	8ck	Haze	W	.....	0	0	Cloudy	
Augusta, Ga.	.....	.....	30.26	768.6	37	2.8	90	N	1	0.4	.....	Haze	Haze	.....	.....	0	0	Hazy	
Baltimore, Md.	.....	.....	30.22	767.6	37	2.8	80	NW	4	1.8	.....	.....	10s	.....	.....	0	0	Cloudy	
Barnegat, N. J.	.....	.....	30.18	766.6	33	0.6	90	W	5	2.2	.....	8ck	Haze	NW	.....	0	0	Fair	
Bismarck, Dakota	28.28	718.3	30.01	762.2	25	— 3.9	75	SE	6	2.7	.....	.....	10s	.....	.....	0	0	Cloudy	
Boston, Mass.	.....	.....	30.13	765.3	25	— 3.9	63	NW	8	3.6	.....	4cs	Haze	W	.....	0	0	Fair	
Breckenridge, Minn.	.....	.....	30.30	769.6	18	— 7.8	69	SE	10	4.5	.....	0	2s	.....	.....	0	0	Clear	
Buffalo, N. Y.	.....	.....	30.21	767.3	26.5	— 3.1	83	W	6	2.7	.....	1c	2k	.....	W	0	0	Fair	
Burlington, Vt.	.....	.....	30.20	767.1	16	— 8.9	66	Calm	0	0	.....	5c	0	E	.....	0	0	Fair	
Cairo, Ill.	.....	.....	30.34	770.6	36	2.2	70	Calm	0	0	.....	8cs	0	W	.....	0	0	Fair	
Cape Hatteras, N. C.	.....	.....	30.18	766.6	38	3.3	71	NE	1	0.4	.....	0	0	.....	.....	0	0	Clear	
Cape Henry, Va.	.....	.....	30.23	767.8	38	3.3	81	SW	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Cape Lookout, N. C.	.....	.....	30.24	768.1	42	5.6	75	NE	8	3.6	.....	1c	Haze	NE	.....	0	0	Fair	
Cape May, N. J.	.....	.....	30.20	767.1	36	2.2	80	W	12	5.4	.....	2k	0	W	.....	0	0	Fair	
Charleston, S. C.	.....	.....	30.20	767.1	36	2.2	80	W	12	5.4	.....	0	Haze	.....	.....	0	0	Clear	
Cheyenne, Wyoming	23.93	607.8	30.24	768.1	46	7.8	85	N	6	2.7	.....	0	1s	.....	.....	0	0	Clear	
Chicago, Ill.	.....	.....	29.87	758.7	24	— 4.4	88	W	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Cincinnati, Ohio	.....	.....	30.34	770.6	29	— 1.7	77	SW	6	2.7	.....	.....	Fog	.....	.....	0	0	Foggy	
Cleveland, Ohio	.....	.....	30.27	768.8	32	0.0	79	NW	1	0.4	.....	.....	Fog	.....	.....	0	0	Foggy	
Corsicana, Tex.	.....	.....	30.31	769.9	23	— 5.0	100	SW	5	2.2	.....	.....	Fog	.....	.....	0	0	Foggy	
Davenport, Iowa	.....	.....	30.15	765.8	47	8.3	62	NE	5	2.2	.....	1ck	5s	.....	.....	Inap.	Inap.	Cloudy	
Denison, Tex.	.....	.....	30.40	772.1	28	— 2.2	77	Calm	0	0	.....	.....	.....	.....	.....	0	0	Fair	
Denver, Col.	24.73	628.1	30.20	767.1	42	5.6	74	NE	2	0.9	.....	.....	10s	.....	NE	0	0	Cloudy	
Detroit, Mich.	.....	.....	29.95	760.7	28	— 2.2	88	Calm	0	0	.....	5c	0	.....	.....	0	0	Fair	
Dodge City, Kan.	27.52	699.0	30.27	768.8	25	— 3.9	75	NW	3	1.3	.....	0	0	.....	.....	0	0	Clear	
Dubuque, Iowa	.....	.....	29.90	759.4	34	1.1	80	E	6	2.7	.....	.....	10s	.....	SE	0	0	Cloudy	
Duluth, Minn.	.....	.....	30.38	771.6	25	— 3.9	75	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Eastport, Me.	.....	.....	30.29	769.4	22	5.6	85	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Erie, Pa.	.....	.....	30.08	764.0	20	— 6.7	70	NW	9	4.0	.....	0	0	.....	.....	0	0	Clear	
Escanaba, Mich.	.....	.....	30.26	768.6	28	— 2.2	77	SW	6	2.7	.....	2c	Haze	.....	.....	0	0	Fair	
Fort Gibson, Indian Ter.	.....	.....	30.35	770.9	11	—11.7	61	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Ft. St. Michael, Alaska	.....	.....	30.20	767.1	36	2.2	62	E	7	3.1	.....	2c	0	.....	.....	0	0	Clear	
Fort Sill, Indian Ter.	29.01	736.8	30.16	766.1	41	5.0	63	N	4	1.8	.....	.....	10s	.....	.....	0	0	Cloudy	
Fort Sully, Dakota	28.39	721.1	30.12	765.0	33	0.6	89	SE	8	3.6	.....	.....	10s	.....	.....	0.03	0.8	Cloudy	
Florence, Arizona	28.47	723.1	30.00	762.0	52	11.1	.....	E	.....	.....	.....	0	0	.....	.....	0.04	1.0	Clear	
Galveston, Tex.	.....	.....	30.09	764.3	54	12.2	73	E	16	7.2	.....	5cs	Haze	SW	.....	0	0	Fair	
Grand Haven, Mich.	.....	.....	30.36	771.1	27	— 2.8	82	N	5	2.2	.....	0	Sm'e	.....	.....	0	0	Clear	
Indianapolis, Ind.	.....	.....	30.35	770.9	29	— 1.7	67	NW	1	0.4	.....	0	0	.....	.....	0	0	Clear	
Indianola, Tex.	.....	.....	30.13	765.3	55	12.8	87	E	22	9.8	.....	10cs	Haze	.....	.....	0.62	15.7	Cloudy	
Jacksonville, Fla.	.....	.....	30.18	766.6	56	13.3	81	N	4	1.8	.....	.....	10s	.....	.....	Inap.	Inap.	Cloudy	
Keokuk, Iowa	.....	.....	30.36	771.1	31	— 0.6	79	NE	4	1.8	.....	8k	0	NE	.....	0	0	Fair	
Key West, Fla.	.....	.....	30.10	764.5	69	20.6	90	NE	4	1.8	.....	.....	Fog	.....	.....	0	0	Foggy	
Kittyhawk, N. C.	.....	.....	30.24	768.1	33	0.6	89	N	6	2.7	.....	0	0	.....	.....	0	0	Clear	
Knoxville, Tenn.	.....	.....	30.28	769.1	34	1.1	69	W	1	0.4	.....	1c	0	W	.....	0	0	Clear	
La Crosse, Wis.	.....	.....	30.36	771.1	25	— 3.9	75	W	5	2.2	.....	0	0	.....	.....	0	0	Clear	
Leavenworth, Kan.	.....	.....	30.32	770.1	32	0.0	79	N	1	0.4	.....	2ck	Fog	NW	.....	0	0	Fair	
Louisville, Ky.	.....	.....	30.33	770.4	32	0.0	79	N	2	0.9	.....	0	0	.....	.....	0	0	Clear	
Lynchburg, Va.	.....	.....	30.23	767.8	31	— 0.6	74	Calm	0	0	.....	0	0	.....	.....	0	0	Clear	
Malone, N. Y.	.....	.....	30.16	766.1	16	— 8.9	83	SE	7	3.1	.....	5ck	0	NW	.....	0	0	Fair	
Marquette, Mich.	.....	.....	30.29	769.4	25	— 3.9	63	NW	4	1.8	.....	0	0	.....	.....	0	0	Clear	
Memphis, Tenn.	.....	.....	30.30	769.6	39	3.9	63	NE	5	2.2	.....	2c	Sm'e	SW	.....	0	0	Fair	
Milwaukee, Wis.	.....	.....	30.39	771.9	23	— 5.0	100	NW	5	2.2	.....	0	Fog	.....	.....	0	0	Clear	
Mobile Ala.	.....	.....	30.18	766.6	46	7.8	76	N	5	2.2	.....	Haz	Haz	.....	.....	0	0	Hazy	
Montgomery, Ala.	.....	.....	30.20	767.1	44	6.7	88	N	3	1.3	.....	10ck	Fog	W	.....	0	0	Cloudy	
Morgantown, W. Va.	29.14	740.1	30.25	768.3	32	0.0	79	NE	1	0.4	.....	.....	10s	.....	SW	0	0	Cloudy	
Mt. Washington, N. H.	23.56	598.4	29.92	760.0	7	—13.9	77	NW	30	13.4	.....	5c	0	.....	.....	0	0	Fair	
Nashville, Tenn.	.....	.....	30.31	769.9	34	1.1	79	NW	2	0.9	.....	5c	Fog	W	.....	0	0	Fair	
New Haven, Conn.	.....	.....	30.20	767.1	35	1.7	61	Calm	0	0	.....	.....	10s	.....	NW	0	0	Cloudy	
New London, Conn.	.....	.....	30.13	765.3	31	— 0.6	68	Calm	0	0	.....	5ck	2s	W	W	0	0	Fair	
New Orleans, La.	.....	.....	30.14	765.5	49	9.4	71	NE	7	3.1	.....	0	Sm'e	.....	NE	0	0	Clear	
Newport, R. I.	.....	.....	30.14	765.5	31	— 0.6	79	Calm	0	0	.....	7k	2s	W	W	0	0	Cloudy	
New York, N. Y.	.....	.....	30.16	766.1	35.5	1.9	70	NW	2	0.9	.....	5k	Fog	NW	NW	0	0	Cloudy	
Norfolk, Va.	.....	.....	30.24	768.1	35	1.7	84	SW	1	0.4	.....	0	Fog	.....	.....	0	0	Clear	
North Platte, Neb.	27.18	690.4	29.87	758.7	27	— 2.8	88	SE	24	10.7	.....	.....	10s	.....	.....	0	0	Threatening	
Omaha, Neb.	29.16	740.7	30.30	769.6	33	0.6	69	Calm	0	0	.....	5ck	5s	W	.....	0	0	Cloudy	
Oswego, N. Y.	.....	.....	30.20	767.1	29.5	— 1.4	83	S	2	0.9	.....	5ck	5s	NW	.....	0	0	Cloudy	
Pembina, Dakota	.....	.....	30.28	769.1	8	—13.3	78	S	6	2.7	.....	0	0	.....	.....	0	0	Clear	
Philadelphia, Pa.	.....	.....	30.20	767.1	34	1.1	90	W	4	1.8	.....	5ck	Fog	W	.....	0	0	Fair	
Pike's Peak, Col.	17.55	445.8	29.76	755.9	2.5	—16.4	56	SW	9	4.0	.....	5cs	.....	SW	.....	0	0	Lunar halo	
Pittsburgh, Pa.	.....	.....	30.24	768.1	30	— 1.1	89	N	5	2.2	.....	0	0	.....	.....	0	0	Clear	
Port Huron, Mich.	.....	.....	30.26	768.6	23	— 5.0	86	Calm	0	0	.....	0	0	.....	.....	0	0	Foggy	
Portland, Me.	.....	.....	30.10	764.5	24	— 4.4	74	NW	1	0.4	.....	5ck	2s, fg	NW	.....	0	0	Fair	
Portland, Oregon	.....	.....	30.13	765.3	47	8.3	92	S	8	3.6	.....	.....	Haze	.....	.....	0.19	4.8	Cloudy	
Punta Rassa, Fla.	.....	.....	30.12	765.0	66.5	19.2	97	NE	5	2.2	.....	.....	10s	.....	.....	0	0	Foggy	
Rochester, N. Y.	.....	.....	30.19	766.8	27	— 2.8	77	W	6	2.7	.....	5ck	Fog	NW	.....	0	0	Fair	
Salt Lake City, Utah.	25.65	651.5	29.98	761.5	40	4.4	82	NW	4	1.8	.....	.....	10s	.....	.....	0	0	Cloudy	
Sandy Hook, N. J.	.....	.....	30.18	766.6	35	1.7	70	W	10	4.5	.....	8ck	0	W	.....	0	0	Cloudy	
San Diego, Cal.	.....	.....	30.07	763.8	51	10.6	93	Calm	0	0	.....	0	2s	.....	.....	0	0	Clea	
San Francisco, Cal.	.....	.....	30.12	765.0	52	11.1	72	W	12	5.4	.....	5cs	Haze	.....	.....	0	0	Fair	
Santa Fé, N. M.	23.18	588.8	29.72	754.9	24	— 4.4	87	NW	7	3.1	.....	.....	10s	.....	.....	0.01	0.3	Cloudy	
Savannah, Ga.	.....	.....	30.22	767.6	45	7.2	84	NE	5	2.2	.....	Fog	Sm'e	.....	.....	0	0	Smoky	
Shreveport, La.	.....	.....	30.23	767.8	46	7.8	77	NE	6	2.7	.....	5cs	0	.....	.....	0	0	Fair	
Smithville, N. C.	.....	.....	30.24	768.1	45	7.2	92	NE	4	1.8	.....	2c	0	NE	.....	0	0	Fair	
Springfield, Mass.	.....	.....	30.17	766.3	26	— 3.3	75	SW	1	0.4	.....	.....	10ks	.....	SW	0	0	Cloudy	
St. Louis, Mo.	.....	.....	30.26	768.6	34	1.1	62	NE	4	1.8	.....	0	0	.....	.....	0	0	Clear	
St. Marks, Fla.	.....	.....	30.18	766.6	51	10.6	97	N	4	1.8	.....	.....	Fog	.....	.....	0	0	Foggy	
St. Paul, Minn.	.....	.....	30.33	770.4	24	— 4.4	87	W	1	0.4	.....	Haz	Haze	.....	.....	0	0	Hazy	
St. Paul's Island, Alaska	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Thatcher's Island, Mass.	.....	.....	30.13	765.3	29	— 1.7	67	NW	8	3.6	.....	1c	0	NW	.....	0	0	Clear	
Toledo, Ohio	.....	.....	30.28	769.1	28	— 2.2	77	W	3	1.3	.....	0	Haze	.....	.....	0	0	Hazy	
Tucson, Arizona	27.54	699.5	30.09	764.3	42	5.6	.....	E	.....	.....	.....	0	0	.....	.....	0.01	0.3	Clear	
Tybee Island, Ga.	.....	.....	30.22	767.6	49	9.4	85	NE	8	3.6	.....	Haz	0	.....	.....	0	0	Clear	
Vicksburg, Miss.	.....	.....	30.24	768.1	49	7.8	64	Calm	0	0	.....	8ck	Sm'e	SW	NE	0	0	Fair	
Virginia City, M. T.	24.19	614.4	29.67	753.6	25	— 3.9	88	SE	2	0.9	.....	8k	2ks	W	W	0.20	5.1	Cloudy	
Washington, D. C.	.....	.....	30.22	767.6	34	1.1	85	SE	2	0.9	.....	0	8s	.....	W	0	0	Smoky	
Wilmington, N. C.	.....	.....	30.24	768.1	38	3.3	90	E	2	0.9	.....	2c	Fog	W	.....	0	0	Fair	

UNITED STATES SERIES.—CONTINUED.

STATIONS.	BAROMETER. Corrected for instrum'tal error and temperature. Inches.	Millimeters.	Reduced to sea-level. Inches.	Millimeters.	TEMPERATURE OF THE AIR. Fahrenheit.	Centigrade.	RELATIVE HUMIDITY. Per cent.	WIND. Direction. From—	Velocity. Miles per hour.	Meters per second.	Force. 0—10.	CLOUDS. Amount. U'p'er 0—10.	Low'r, 0—10.	Direction. Upper. From—	Lower. From—	RAIN-FALL OR MELTED SNOW IN THE PAST 24 HOURS. Inches.	Millimeters.	WEATHER.	OBSERVER.
Wood's Holl, Mass.	.....	.....	30.14	765.5	32	0.0	60	NW	5	2.2	.....	.....	8ks	.....	NW	0	0	Cloudy	
Yankton, Dakota	28.95	735.3	30.32	770.1	29	— 1.7	77	Calm	0	0	.....	.....	10s	.....	NW	0	0	Cloudy	
Yuma, Arizona	.....	.....	30.04	763.0	58	14.4	.....	N	.....	.....	.....	0	0	.....	.....	0	0	Clear	
SUB-SERIES.																			
Kingston, Jamaica, W. I.	.....	.....	30.20	767.1	76	24.4	82	Calm	0	0	.....	0	2s	.....	.....	0	0	.....	James Gall.
Navassa, W. I.	.....	.....	.....	.....	78	25.6	.....	NE	.....	.....	3	.....	.....	.....	.....	0	0	.....	Dr. G. H. Davison.
Clifton, Ja., W. I.	27.20	690.9	30.00	762.0	66	18.9	83	NE	1.0	0.4	.....	2c	0	NE	.....	0	0	Fine	C. Partridge.
Paramaribo, D. Guiana, S.A.	.....	.....	30.06	763.5	83	28.3	79	E	.....	.....	3	4c	0	E	.....	0	0	Fair	C. J. Hering.
Batavia, Dutch Guiana, S.A.	30.02	762.4	.....	.....	81.5	27.5	.....	E	.....	.....	.....	.....	.....	.....	.....	0	0	Cloudy	Dr. H. Groot.
Medellin, Colombia, S. A.	25.22	640.6	.....	.....	68.5	20.3	76	Calm	.....	.....	0	3k	1ks	.....	.....	0	0	Fair	Thomas Herran.
York Factory, B. A.	.....	.....	30.20	767.1	—15 0	—26.1	72	NW	8	3.6	.....	0	0	.....	.....	0	0	Clear	J. Fortescue, W. Wood
Honolulu, Oahu, H. I.	.....	.....	29.96	761.0	71	21.7	95	NE	.....	.....	1	.....	.....	.....	.....	0	0	Clear	Daniel Smith.
Makawao, Maui, H. I.	.....	.....	29.87	758.7	63	17.2	89	Calm	.....	.....	0	0	10n	.....	.....	1.2	30.5	.....	F. L. Clarke

NOTE.—The originals give the amount of cloudiness by the scale 0 to 4, except York Factory, Makawao, Medellin and Paramaribo. The elevation of the barometer at Bismarck is 1,677 feet, or 511.1 meters; Cheyenne, 6,057.3 ft., or 1,846.2 m.; Clifton, about 2,692 ft., or 821.5 m.; Denver, 5,185 ft., or 1,565.2 m.; Dodge City, 2486ft., or 757.5 m.; Fort Sill, 1,100 (?) ft., or 335.3 (?) m.; Fort Sully, 1,678 (?) ft., or 511.4 (?) m.; Florence, 1,550 (?) ft., or 472.5 (?) m.; Makawao, 2,205 ft., or 672.1 m.; Morgantown, 1,027.9 ft., or 313.3 m.; Medellin, 4,876 ft., or 1,486.2 m.; Mt. Washington, 6,285 ft., or 1,915.6 m.; North Platte, 2,846 ft., or 867.4 m.; Omaha, 1,054.6 ft., or 321.4 m.; Pike's Peak, 14,100.7 ft., or 4,313.1 m.; Salt Lake City, 4,362.2 ft., or 1,329.6 m.; Santa Fé, 6,862.2 (?) ft., or 2,091.6 (?) m.; Tucson, 2,545 (?) ft., or 775.7 (?) m.; Virginia City, 5,480 (?) ft., or 1,670.3 (?) m.; Yankton, 1,278 ft., or 389.5 m. The following constants are added in correcting the barometric observations for altitude: Cheyenne, 5.94 inches; Denver, 5.22 in.; Makawao, 2.170 in.; Mt. Washington, 6.36 in.; Pike's Peak, 12.21 in.; Salt Lake City, 4.33 in.; Santa Fé, 6.54 in.; Tucson, 2.59 in.; Virginia City, 5.48 in. The elevation of Batavia is about feet; the barometric readings need the addition of 0.2 mm. or 0.01 in. for reduction to sea-level.

UNITED STATES NAVAL SERIES.

By authority of the **SECRETARY OF THE NAVY.**

Furnished by the coöperation of the Navy Department, through Commodore Daniel Ammen, U. S. N., Chief of Bureau of Navigation.

STATIONS AND VESSELS.	True course toward—	Hourly rate in knots.	*Barometer as reported.		Temperature of the Air.		Relative Humidity.	Wind.				Clouds.				Rain-fall or melted snow in the past 24 hours.		State of Ocean.	Direction of swell from—	Weather.	Observer.
								Direction.	Velocity		Force.	Amount.		Direction.							
												Up'er	Low'r	Up'er	Low'r						
			Inches.	Millimeters.	Fahrenheit.	Centigrade.	Per cent.	From—	Miles per hour.	Meters per second.	0—10.	0—10.	0—10.	From—	From—	Inches.	Millimeters.				
Naval Academy, Annapolis, Md.			29.67	751.1	34	1.1	79	NW			2		8			0	0			Cloudy	
Naval Hospital, Annapolis, Md.			30.22	767.6	32	0.0	90	Calm			0		7		SW	0	0			Cloudy	
Navy Yard, Mare Island, Cal.			30.26	768.6	52	11.1		NW			1		2			0	0			Clear	
Navy Yard, Norfolk, Va.			30.32†	770.1†	31	— 0.6	89	Calm	0	0			0			0	0			Blue sky	
Navy Yard, Pensacola, Fla.			30.25	768.9	50	10.0	86	NNE	9	4.0			3			0	0			Foggy	
Navy Yard, Portsmouth, N.H.			30.08	764.0	18	— 7.8		NW	2	0.9					S&E	0	0			Clear.	
¶ Canonicus, New Orleans, La.			30.09	764.3	50	10.0	93	ENE			1		2		W					Fair	
Colorado, New York, N. Y.			30.22	767.6	36	2.2		SW	6	2.7			10			0	0			Foggy	
Essex, Vera Cruz, Mex.			29.96	761.0	75	23.9	95	W			0–1		10		N			Smooth		‡D. clouds	
¶ Gettysburg, Savona, Italy			29.71	754.6	59	15.0		NE			5		8		NE			Moderate.	NE	Squally	
Hartford, Hampton Roads, Va.			30.31	769.9	40	4.4		N			1		0			0	0			Pleasant	
Huron, Charleston, S. C.			30.30	769.6	49	9.4	85	NNE			1–2		2							Hazy	
Lackawana, Mare Island, Cal.			29.87	758.7	56	13.3	87	NW			2		9		NE			Smooth		‡D. clouds	
Marion, Port Said, Egypt			30.00	762.0	65	18.3	94	NNE			1		4		E			Smooth		‡D. clouds	
Michigan, Erie, Pa.			29.74	755.4	25	— 3.9	75	WSW			1		2		W					Partly cl'dy	
Monongahela, Baltimore, Md.			30.21	767.3	38	3.3		W			2		c,ck,k							Hazy	
New Hampshire, Port Royal, S. C.			30.39	771.9	48	8.9		NE			1		7		N&E					‡D. clouds	
Omaha, Panama			30.02	762.5	76	24.4	91	NW			3		1			0	0	Smooth		Hazy	
Ossipee, Pensacola, Fla.			30.20	767.1	53	11.7		N			1		2		SW					Hazy	
Pensacola, Panama			30.10	762.2	78	25.6	95	NW			1		1			0	0			Pleasant	
Plymouth, New Orleans, La.			30.17	766.3	51	10.6	72	ENE			2		0							Hazy	
Ranger, Hampton Roads, Va.			30.37	771.4	38.5	3.6		Calm			0		2					Smooth		Hazy	
Richmond, Montevideo, Uruguay			30.05	763.3	69.0	20.6	95	E			2		10		E					Showery	
¶ Rio Bravo, Matamoras, Mex.			29.90	759.4	50	10.0		W			1		10							Drizzling	
Santee, Annapolis, Md.			30.26	768.6	36	2.2	80	NW			2		8							Cloudy	
St. Louis, League Island, Pa.			30.06	763.5	31.5	— 0.3		SW	4	1.8			10		SW	0	0			Dense fog	
Vandalia, Constantinople, Turkey.			29.72	754.9	50	10.0	100	NNW			4		10		NE					‡D. clouds	
Wabash, Boston, Mass.			30.17	766.3	29	— 1.7		NW	3	1.3			7			0	0			Hazy	
Wyoming, Washington, D.C.			30.10	764.5†	35	1.7		SW			2		8		WSW						

* It is not known that the barometer is corrected for temperature, instrumental error or elevation. † Aneroid Barometer. ‡ Detached clouds. ¶ Barometer corrected for instrumental error and reduced to sea-level.

UNITED STATES MARINE SERIES

REPORTED TO THE OFFICE OF THE CHIEF SIGNAL OFFICER OF THE ARMY.

NAMES OF VESSELS.	True course toward—	Hourly rate in knots.	Barometer reduced to sea-level. Inches.	Barometer reduced to sea-level. Millimeters.	Temperature of the Air. Fahrenheit.	Temperature of the Air. Centigrade.	Relative Humidity. Per cent.	Wind. Direction. From—	Wind. Velocity. Miles per hour.	Wind. Velocity. Meters per second.	Wind. Force. 0—10.	Clouds. Amount. Up'er 0—10.	Clouds. Amount. Low'r 0—10.	Clouds. Direction. Upper. From—	Clouds. Direction. Lower. From—	State of Ocean.	Direction of Swell from—	Weather.	OBSERVER
PACIFIC MAIL S. S. CO. MARINE SERIES. Furnished by the coöperation of ————, President; Williams, Blanchard & Co., Agents.																			
S. S. City of Peking																			Lt. Z. L. Tanner, U.S.N
OCCIDENTAL AND ORIENTAL S. S. CO. MARINE SERIES. Furnished by the coöperation of George H. Bradbury, President; T. H. Goodman, Agent.																			
S. S. Belgic																			Capt. John Metcalf.
S. S. Gaelic																			Capt. W. H. Kidley
S. S. Oceanic																			Capt. H. Parsell.
NORTH GERMAN LLOYD OF BREMEN MARINE SERIES. Furnished by the coöperation of A. Schumacher & Co., Agents.																			
S. S. Baltimore, N. 49°, 13', W. 20°, 34'	W ½ S	10.5	29.82	757.4	54.5	12.5		SSE			5		Haze			Rough.		Raining	Capt. H. Andressen.
S. S. Berlin																			Capt. C. Pohle.
S. S. Braunschweig																			Capt. K. Undütsch.
S. S. Nürnberg																			Capt. A. Jaeger.
S. S. Ohio																			Capt. G. Meyer.
MARINE SERIES. (Miscellaneous.) Furnished by the coöperation of the Observer named.																			
Schooner Addie Fuller, at Providence, R. I.			30.09	764.3	26	— 2.2	88	N	5	2.2		2ck	0					Clear	Capt. James Jorgensen

NOTE.—The schooner Addie Fuller gives the amount of cloudiness by the scale 0 to 4.

COLLATED AT THE OFFICE OF THE CHIEF SIGNAL OFFICER OF THE ARMY, WASHINGTON, D. C.

The records which appear in this Bulletin are copied from the regular exchanges of this office, made in each instance in compliance with an especial request and are published for the uses of the coöperating observers. The barometric readings in the first two columns are reduced to freezing and their respective standards; those in the second two also to mean sea-level. The "weather" is generally published as given.

When the distinction between the upper and lower strata of clouds is not reported, the *kinds* or *types*, viz: cirrus, cumulus, stratus, nimbus, scud, fracto, pallio, haze, fog and smoke, as indicated, respectively, by the letters c, k, s, n, d, f, p, hz., fg. and sm'e, are generally published with the amount in the lower-cloud column. The distinction between the upper and lower strata is carefully made in the United States Series and a portion of the Canadian Series, and the types are indicated by the above letters or their combinations in the proper column.

Albert J. Myer

Brig. Gen. (Bvt. Assg'd,) Chief Signal Officer, U. S. A.